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THE DIURETIC EFFECT OF GLOBIN IN CHRONIC GLOMERULONEPHRITIS

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In the management of the nephrotic state of chronic and subacute glomerulonephritis, edema offers a challenge to the attending physician. A salt-poor diet, moderate and carefully controlled water reduction, a protein intake sufficient not only to maintain a positive balance but also to restore progressively lost protein reserve, and proper cardiac stimulation if signs of insufficiency exist, are the basic elements of therapy.[1] These, however, are not always sufficient.

It is often necessary to reduce or eliminate edema by means of diuretics. As diuretic agents urea, potassium chloride, ammonium chloride, mercurophylline injection (mercupurin), plasma, human serum albumin and globin have been used with varying degrees of success. Urea and mannitol, the first administered by mouth, the latter intravenously, are generally considered safe and should be tried, but their action is far from constant. Potassium chloride and ammonium chloride have been found to be effective but cannot be used in the presence of renal insufficiency.

Mercurophylline injection, probably the most effective of the agents so far mentioned, is also the most likely to be toxic in cases of renal insufficiency.

Plasma, the most commonly used agent, is generally very effective, adds, at least temporarily, to the protein stores as it is not readily metabolized and, when properly used, is practically free from the danger of reactions. Contrarily to common belief, it does not have to be concentrated to be effective.

The sodium chloride content of plasma can be considered a disadvantage only in a relatively small number of cases. The economic question is probably the most serious objection.

Concentrated albumin has been used successfully [2] and may be obtained with low salt content but is not readily available and offers no outstanding advantage to offset the high cost, which will always prove a serious difficulty to its widespread use.

Globin, in preliminary studies, has proved more effective than plasma, can be made isotonic with glucose, thus reducing the sodium chloride content to 0.1 Gm. per hundred cubic centimeters or less, and it is economical, since it can be cheaply prepared from erythrocytes left over from the preparation of plasma.[3]

A case of chronic glomerulonephritis, typical of several treated with globin, is presented here:

J. C.—A man aged 54, admitted to the hospital for the first time on April 4, 1945, had had repeated attacks of upper respiratory infections during the fall of 1944 and the following winter. During the last week of January 1945 he noticed for the first time swelling of the feet and ankles, which became progressively worse and persistent. The patient also complained of some dyspnea on exertion. The physical examination revealed considerable edema of the legs, a few rales at the bases of both lungs, slight enlargement of the heart to the left and a blood pressure of 230/124 mm. of mercury. The patient's weight was 98.6 Kg., or about 8 Kg. over his normal level. Questioning revealed that his diet had habitually been low in proteins.

The laboratory studies showed a normal morphologic blood picture, granular casts, a cloud of albumin and occasional erythrocytes in the urine, a specific gravity fixed between 1.020 and 1.024, serum albumin 2.8 Gm. per hundred cubic centimeters, total serum protein 4.5 Gm. per hundred cubic centimeters, blood cholesterol 457 mg. per hundred cubic centimeters with 84 per cent esters and a basal metabolic rate of plus 3 per cent of normal. All liver functional studies gave a result within normal limits.

The patient improved with rest, a diet higher in protein and without specific medication; in eleven days most of the edema disappeared. On May 6 edema of the feet and neck reappeared, accompanied by difficulty in swallowing. He was readmitted to the hospital: the weight on admission was 98.1 Kg. and the serum albumin concentration 2.8 Gm. per hundred cubic centimeters with total serum protein of 5.7 Gm. per hundred cubic centimeters. The measured plasma volume was 3,774 cc., while the expected volume from his physical measurements was 3,668 cc.

The total protein in twenty-four hour urine specimens varied between 10.3 and 10.8 Gm. The blood urea nitrogen content was 12 mg. per hundred cubic centimeters. The patient was placed on a high protein diet and received 30 Gm. of protein intravenously as concentrated plasma. He was discharged improved with a weight loss of 3.1 Kg. In the period of time between June 13 and Dec. 6, 1945 the patient received twenty-seven intravenous injections of plasma, each averaging 15 Gm. of plasma protein. The protein intake varied a great deal but on accurate analysis of the diet record was found to be generally insufficient.

From the Laboratory of Clinical Pathology of the Bryn Mawr Hospital. Miss Margaret Dolan rendered technical help in this work. The Smith, Kline & French Laboratories of Philadelphia furnished the globin used in this experiment; the Frederick Stearns & Co. of Detroit furnished the protein hydrolysate ("Essenamine").

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He was admitted to the hospital for the third time on Dec. 9, 1945 because of recurrence of severe edema, clay colored stools, dark urine and jaundice, which appeared two days before admission. There had been numerous cases of infectious hepatitis in the neighborhood.

On admission the patient was intensely jaundiced, and his liver was enlarged. There was severe ankle and facial edema. The blood pressure was 158/110 and the weight 96.9 Kg. The serum bilirubin content was 6.1 mg. per hundred cubic centimeters and the total serum proteins 4.7 Gm. per hundred cubic centimeters with 2.2 Gm. per hundred cubic centimeters of albumin. The patient was given a diet high in protein (120 Gm.) and low in fat (60 Gm.) with a total caloric value of 2,800, with hourly dextrose administration by mouth. On this regimen the icterus subsided gradually and on December 13 was no longer visible. Up to this time there was no weight loss, the patient being generally on a positive water balance with an average intake, before globin administration, of a little over 2,300 cc. per diem and an average urine output of 760 cc.

For five days beginning December 13 the patient received daily 60 Gm. of globin intravenously as a 4 per cent solution. No attempt was made to restrict the salt intake, and the globin solution was made isotonic with 0.85 per cent of sodium chloride. The water intake by mouth was reduced to maintain the total daily intake constant; the patient's poor appetite, attributed to the low fat diet, caused a temporary decline in the protein intake. Chart 1 shows that the administration of globin was accompanied by diuresis, with an average output of 2,231 cc. of urine per diem, the total water intake remaining about 2,300 cc. per diem. During this period the patient lost 5 Kg. of body weight. The measured plasma volume remained about the same (4,109 cc. on December 16 and 4,039 on December 22); the total plasma protein on December 22 had risen

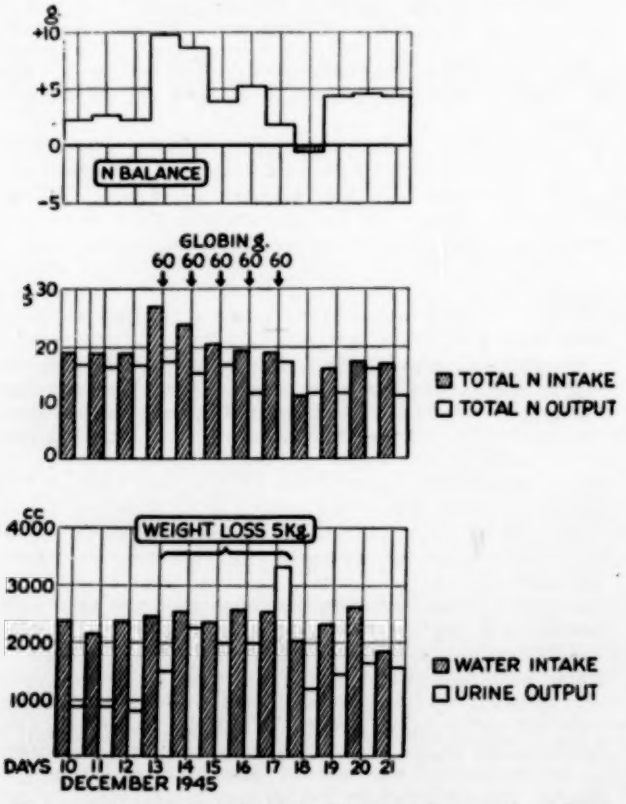

Chart 1.—Diuretic effect of globin with patient in a positive nitrogen balance.

to 6.5 Gm. per hundred cubic centimeters with 3.3 Gm. of albumin per hundred cubic centimeters, resulting in an increase of circulating protein of 69.4 Gm. During the administration of globin the total nitrogen losses in the urines did not increase, while the losses in the stools also remained constant. This resulted in a sharp increase in the nitrogen balance. The patient was discharged from the hospital on December 22 edema free, the weight being 91.3 Kg., or a total weight loss of 6.8 Kg. from the time of admission.

The patient was well for one month after discharge, when he again noticed ankle edema. During this period he tried to maintain a high protein diet, but actual study of the nitrogen balance showed it to be almost constantly negative. The oral

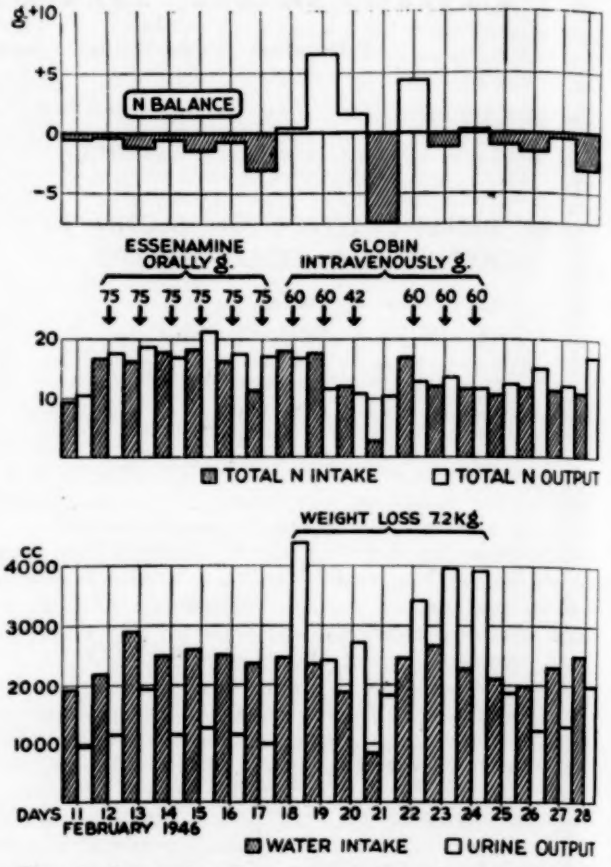

Chart 2.—Comparative effect of essenamine orally and globin intravenously on nitrogen balance and diuresis.

administration of 75 Gm. of a protein hydrolysate ("Essenamine") resulted in an increased nitrogen loss in the urine, the increase being made up to a large extent by increased urea nitrogen output and increased protein nitrogen. On February 17 the patient was readmitted to the hospital. He had ankle and facial edema, a weight of 102.2 Kg. and a blood pressure of 210/110. The urinalysis showed granular casts, red blood cells and a cloud of albumin (from 0.9 to 3 Gm. of protein nitrogen in twenty-four hours). The blood urea nitrogen was 15 mg. per hundred cubic centimeters and the total serum proteins 4.7 Gm. per hundred cubic centimeters, the albumin being 2.1 Gm. per hundred cubic centimeters. The plasma volume was 3,750 cc. The patient was placed on a protein intake of 66 Gm. daily and was given intravenously in a period of seven days 342 Gm. of globin as a 4 per cent solution in saline solution. This was accompanied by a considerable diuresis, the daily urinary output averaging 3,210 cc., while for seven days prior to globin administration the average was 1,234 cc. (chart 2). The weight loss in the seven day period was 7.2 Kg., and the patient once again became edema free. The plasma protein rose to 5.6 Gm. per hundred cubic centimeters, with 2.3 Gm. of albumin per hundred cubic centimeters. For the four days following the last administration of globin the urinary output averaged 1,517 cc.

On several occasions single doses of 60 Gm. of globin administered as a 4 per cent solution in saline solution resulted in diuresis of over 4,000 cc. for the twenty-four hours following the administration and a corresponding weight loss was noted (chart 3).

During the fourth admission the patient was administered, under conditions similar to those maintained during the admin-

istration of globin, 300 Gm. of plasma protein as normal plasma over a period of five days. A diuresis resulted which was definitely less than that obtained with the globin administration, the total weight loss being only 3.1 Kg.

COMMENT

During the period of observation, no restrictions were placed on the salt and water intake other than noted. After the last admission the patient was placed on a salt free diet with reduced water, a high caloric (2,800) intake and a high protein intake (approximately 120 Gm.). On this regimen the urinary output averaged 1,520 cc. and the urinary nitrogen 14.1 Gm. daily. The patient gained an average of 1.2 Kg. weekly and on April 15, 1946 his weight was 107.6 Kg., considerably higher than on any previous occasion. It appears, therefore, that in this patient the ordinary measures of edema control failed as the disease progressed but that it has been possible to remove edema fluid rapidly by means of intravenous administration of globin.

Better results can be anticipated from the use of salt free globin, which has been employed in similar cases, especially when used in concentrations higher than 4 per cent, which appears to be the iso-oncotic value.

In this patient, as well as in several others, the diuretic effect and weight loss obtained with the administration of globin were definitely greater than when similar amounts of normal plasma protein were administered. During and after globin and plasma administration to nephrotic patients there is no increase of

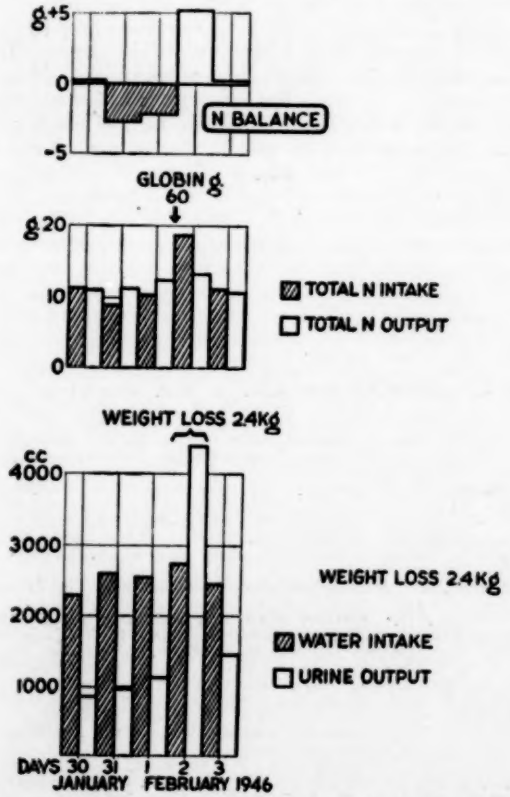

Chart 3.—Diuretic effect from a single dose of globin intravenously.

nitrogen in the urine, whereas a very sharp increase of the nitrogen output occurs constantly when such types of patients are given orally a casein hydrolysate.

Kidney functional studies done before and after administration of large doses of globin to nephrotic patients have shown no change.

CONCLUSIONS

Administration of a globin solution to a patient suffering from chronic glomerulonephritis resulted on several occasions in a profuse diuresis, with disappearance of edema and considerable loss of weight.

An increase in total circulating protein has been noted following the administration of globin.

GRAM-NEGATIVE BACILLUS EMPYEMA CURED BY INTRAPLEURAL PENICILLIN

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Well established empyema thoracis has generally been considered a definite indication for operative drainage, usually through rib resection. Less drastic measures have been ineffective except in occasional cases. Sulfonamide therapy has diminished the severity of cases in which operations have been done and has resulted in some cures without operations when treatment is started early and before the exudate has become thick and purulent.

The use of penicillin, however, has altered the picture considerably. The results of penicillin treatment in 261 collected cases of empyema, exclusive of those which followed thoracic operations or trauma, have recently been analyzed.[1] Between 50 and 65 per cent of the empyemas which were due to the pneumococcus, the beta hemolytic streptococcus and Staphylococcus aureus were completely cured without surgical drainage by aspirations and the use of penicillin parenterally, intrapleurally or by both routes. The same treatment was less frenquently successful in putrid empyemas or in cases due to anaerobic streptococci or to mixed infections. Empyemas in which the organism was a gram-negative bacillus have not been considered suitable for penicillin therapy and were therefore subjected to operation.

A case of empyema in which the causative organism was a gram-negative bacillus and in which a cure was effected by repeated aspirations and intrapleural injections of penicillin is therefore of some interest. Before presenting the details of this case we will summarize briefly the available literature on the effects of penicillin on gram-negative bacilli.

Since Fleming's original observations on the antibacterial effect of penicillin [2] numerous investigators have confirmed and extended his findings that, in general, gram-positive organisms are very sensitive while gram-negative organisms with the exception of the gonococcus and the meningococcus are resistant to the action of penicillin.[3] Sensitivity and resistance, however, are only relative matters. Resistance usually implies that the organism is not sensitive to a concen-

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tration of penicillin that can be attained in the blood and body fluids by ordinary therapeutic doses of penicillin. Since Fleming's original studies, the effectiveness of penicillin has been extended in several ways: (1) by the use of larger doses, (2) by combining it with adjuvants which delay its absorption or its urinary excretion, thus giving higher and more prolonged blood levels, and (3) by local application in high concentrations at the site of the infection, especially through instillations into body cavities or by inhalation. It has also become apparent that there are wide variations in the susceptibility to penicillin even among different strains of the same species, and the less susceptible organisms usually show the greatest strain variability.

Gardner [4] noted complete inhibition of typhoid bacilli in low dilutions of penicillin and morphologic changes similar to those seen in Clostridium welchi when less than the inhibiting concentration was used. Similar changes were noted with Escherichia coli. Later the same author [5] observed changes ending in lysis of typhoid bacilli when they were exposed to penicillin in a concentration of 5 units per cubic centimeter. Elongation of the organisms occurred within two hours at this concentration, but when they were exposed to 1 unit per cubic centimeter only lengthening of the cells was observed after five to six hours and there was no lysis. Zygospore-like forms of E. coli have been described under similar conditions.[6]

Since these observations were made, many workers have demonstrated complete or partial inhibition of gram-negative bacilli by penicillin. The concentrations necessary to produce this effect on most gram-negative bacilli usually range between 50 and 5,000 times that necessary for the inhibition of the standard Oxford strain of Staphylococcus aureus.[7] Some strains of Hemophilus, including Ducrey's bacillus,[8] influenza bacilli [9] and Hemophilus hemolyticus,[10] have been found to be similar in sensitivity to most strains of Staphylococcus aureus obtained from clinical cases. The same fact is also true of occasional strains of other gram-negative bacilli such as Bacillus alkaligenes fecalis.[11] Shwartzman [12] has shown that certain amino acids inhibit the action of penicillin on gram-negative bacilli and that the sensitivity of these gram-negative organisms to penicillin may be enhanced by other amino acids, namely methionine, threonine and methionine sulfoxide. There is a form of penicillin which can be obtained by proper methods from filtrates of the cultures of the same strains of Penicillium notatum which is equally effective against gram-negative and gram-positive organisms. This form of penicillin (penicillin B) is apparently effective only in vitro in the presence of glucose [13] and is probably not the factor in commercial penicillin which is responsible for the activity against gram-negative organisms.

The sensitivity of gram-negative bacilli to penicillin has had clinical application. Favorable results have been reported either by the use of large doses given systemically or by topical application in high concentrations. Cases of chancroid,[14] influenza bacillus meningitis [15] and influenza bacillus empyema [16] and some cases of peritonitis [17] are included among the clinical reports. In addition, experimental peritonitis [18] and intestinal obstruction [19] have been favorably influenced by penicillin. Data have also been presented which suggest that urinary tract infections [20] of certain strains of gram-negative bacilli, particularly of the proteus group, might be favorably affected. In addition there are reports of cases of Friedländer's bacillus infection [21] and pneumonic plague [22] with recovery after penicillin therapy, but the role of the antibiotic in the favorable outcome cannot be evaluated.

REPORT OF CASE

A white man aged 59, admitted to the Boston City Hospital on Oct. 30, 1945 complaining of cough and shortness of breath, had had pneumonia at the age of 27. During World War I, at the age of 32, he was hospitalized at an army hospital because of recurrent, sharp pleuritic pains, for which he was treated with "irradiation" but without improvement, and these pains have recurred periodically. For many years he has had "almost constant" colds, with coryza, postnasal drip and cough productive of varying amounts of mucoid sputum which was never bloody or foul. He had mild orthopnea, exertional dyspnea and fatigue on ordinary activity for three years and was told by his physician two years before admission that he had asthma. He was a moderately heavy drinker and had once been admitted to this hospital for delirium tremens. His diet was grossly deficient. He also had some recent oliguria, nocturia, urgency and frequency.

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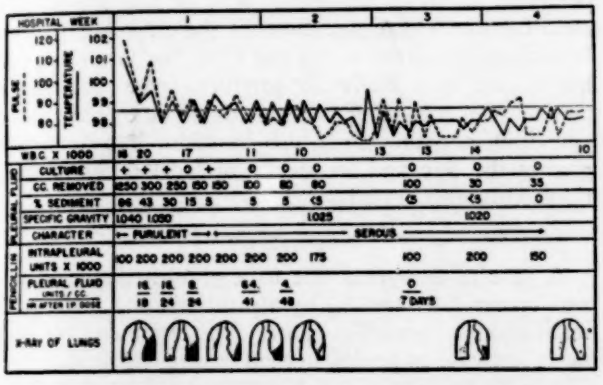
About one month prior to his entry into the hospital the patient developed a severe cold with accentuation of his cough. Two weeks later he was suddenly stricken with a "dagger-like" pain in his left chest, which radiated into his back and stomach like "balls of fire" and caused him to double up. The pain was persistent and steady but was aggravated by respiration and coughing. It was relieved by lying quietly and by heat applied locally. During the ensuing two weeks the severity of the chest pain diminished but his cough became more severe, occurred in paroxysms, was associated with dyspnea and became productive of increasing amounts of mucopurulent sputum. He began to have daily bouts of frank shaking chills and felt feverish and sweaty. His dyspnea increased progressively and was accompanied with profound weakness. He was then sent to the hospital by his physician. No antibiotic or chemotherapy had been given prior to entry.

On physical examination the patient appeared thin, pale, ill kept and middle aged. He was in respiratory distress and appeared both acutely and chronically ill. His temperature was 101 F., pulse rate 120, respiratory rate 32, and blood pressure 185/105. The skin was hot, dry and inelastic. There was no lymphadenopathy. The conjunctivas were pale. The right pupil was larger than the left, but both were round, regular and reacted to light and in accommodation. The right lens contained an immature cataract. The nasal and pharyngeal mucous membranes appeared diffusely inflamed, dry and



Course, treatment and some of the relevant laboratory findings.

swollen. The teeth were dirty and carious, with pyorrheic gums. The tongue was dry, with a brown coat, and there was a mucoid postnasal drip. The trachea was deviated to the right. Examination of the chest showed labored breathing, a respiratory lag on the left, and inspiratory retraction of the supraclavicular and infraclavicular and intercostal spaces. There was a prolongation of both inspiratory and expiratory phases of respiration. There was flatness of the lower two thirds of the left chest, and the tactile fremitus, voice sounds and breath sounds were decreased to absent in this area. Over both upper lungs there were many rhonchi, and there were musical and crepitant rales throughout the rest of the right lung. The heart was essentially normal. The liver was palpable one fingerbreadth below the right costal margin and was nontender. There was slight pitting edema of the ankles and Dupuytren's contractures of the fingers of both hands.

The urine showed a trace of albumin but was otherwise normal. The hemoglobin was 44 per cent (6.8 Gm.), the red blood cell count was 2.56 million and the white blood cell count was 16,100, with 89 per cent polymorphonuclear cells, most of which were young and contained toxic granules. The hematocrit was 24.2 per cent, reticulocyte count 2.3 per cent and icterus index 1. The sputum was white, frothy, mucoid and odorless and did not contain blood. Gram stains of the sputum showed a few gram-positive diplococci and other gram-positive and gram-negative cocci. A Ziehl-Neelsen smear of the sputum was negative for acid-fast organisms. Blood cultures were sterile. Throat cultures yielded pneumococcus type 13 and a gram-negative bacillus. Sputum cultures yielded types 9 and 13 pneumococci at first and later yielded the gram-negative bacillus and other common mouth organisms. Roentgenograms of the chest showed a uniform density of the lower two thirds of the left lung field and a slight mottled density in the lower third of the right lung.

On admission a thoracentesis of the left chest was performed, 1,250 cc. of fibrinopurulent fluid was withdrawn and 100,000 units of penicillin dissolved in 50 cc. of saline solution was instilled into the empyema cavity. The fluid was thick, buff colored and slightly odorous but not foul. It had a specific gravity of 1.040 and contained 86 per cent sediment after prolonged centrifugation. No organisms were seen in the gram and the Ziehl-Neelsen stained smears. Guinea pigs died twenty-four hours after inoculation with the material. Culture of the fluid yielded a pure growth of a gram-negative bacillus.

TABLE 1.—*Minimum Concentration Producing Complete Inhibition*

Antibiotic	Units per Cc.	Micrograms per Cc.	Comparison with Penicillin G by Weight
Penicillin G	0.25	0.15	1.00
Penicillin X	0.125	0.113	0.75
Streptomycin	25.0	25.0	167.00

The subsequent course and treatment are shown in the chart. The patient received only two intramuscular injections of penicillin and no further systemic penicillin therapy or sulfonamides. Thoracentesis was done daily for five days, then every other day and finally at four to seven day intervals. Fluid was withdrawn and penicillin instilled into the empyema cavity each time. The clinical condition improved dramatically within thirty-six hours and thereafter the course was one of progressive improvement. The changes in the character of the pleural fluid are indicated in the chart. There was progressive clearing of the area of density seen in the x-rays. The patient continued to cough and to raise about one-half cupful of mucopurulent sputum daily, but the gram-negative bacillus could no longer be obtained from the cultures. After three weeks of therapy the cavity could not be identified in the x-rays and fluoroscopy showed equal lung function and motion of the diaphragms on the two sides. The patient was discharged from the hospital on the twenty-eighth hospital day. At that time he had been ambulatory for several days, with only slight dyspnea. His ankle edema had disappeared. He had only an occasional twinge of pain in his chest. His hemoglobin had risen to 74 per cent (10.4 Gm.) and his vital capacity increased from 1.1 liters during the second hospital week to 1.8 liters one week later. On a return visit two weeks after discharge from the hospital he showed continued improvement. There were no physical signs of fluid, and an x-ray showed further diminution of the pleural thickening. There was still some asthenia with cough productive of mucoid sputum, culture of which failed to yield any gram-negative bacilli.

TABE 2.—*Levels of Penicillin*

Intrapleural Dose, Units	Hours After Intrapleural Dose	Serum Levels, Units per Cc.
200,000	3	1.0
	6	0.5
	17	0.25
	23	0.06
200,000	1¼	1.0
	15	0.125
	41	Less than 0.02
200,000	23	0.03
	46½	Less than 0.02
200,000	23	0.02

STUDIES ON THE SENSITIVITY OF THE ORGANISM

The organism obtained on four separate occasions from the pleural fluid and also from some of the early sputum and throat cultures was a gram-negative, nonmotile bacillus which

was difficult to classify by its cultural and biologic properties. It was characterized under the ambiguous term Bacterium and fits best into the genus Pasteurella in the hemorrhagic septicemia group.[23] It was tested for its sensitivity to penicillins G and X and to streptomycin by a serial dilution method similar to that of Rammelkamp and Maxon.[24] The results are shown in table 1.

On a weight comparison the organism was slightly more sensitive to penicillin X than to penicillin G and was 167 times more sensitive to penicillin G than to streptomycin. On a unit comparison it was twice as sensitive to penicillin X as to penicillin G and 100 times as sensitive to penicillin G as to streptomycin. The units of streptomycin and penicillin, however, have no relation to each other.

BLOOD AND PLEURAL FLUID LEVELS OF PENICILLIN

Although penicillin was not administered systemically, significant blood levels up to 1 unit per cubic centimeter were maintained for twenty-three hours or longer after an intrapleural instillation of 200,000 units. The values obtained appear in table 2.

The levels of penicillin present in the pleural fluid eighteen to forty-eight hours after some of the instillations are shown in the chart. These were far in excess of the sensitivity of the organism.

COMMENT

This case was one of a large and well established empyema that was cured by aspirations and intrapleural instillations of penicillin without resort to operative drainage. While the favorable initial response may be ascribable in part to the removal of the infected fluid, the continued improvement and the end result must be credited to the penicillin. The first thoracentesis yielded 1,250 cc. of thick pus and an x-ray taken shortly thereafter indicated that there was still a large amount left behind at that time. Succeeding taps yielded progressively thinner fluid in smaller amounts in this case, but the same has not been uniformly true in other cases which have been successfully treated by this method.

The organism was a gram-negative bacillus, and the result in this case suggests that one need not be entirely discouraged from pursuing penicillin treatment because of such a finding. It is important first to determine the sensitivity of the strain and to continue treatment if the organism is relatively sensitive. The favorable clinical response after penicillin treatment is started may serve as a helpful guide to the continuance of therapy. It is worth emphasizing that the organism in this case was much more sensitive to penicillin than to streptomycin by any method of comparison. The generalizations concerning the relative susceptibility of gram-positive and gram-negative organisms to these two antibiotics must be considered subject to exceptions.

The penicillin was given intrapleurally in doses of 100,000 to 200,000 units. With these large doses significant concentrations were maintained up to eighteen to twenty-four hours in the blood and large amounts still remained in the pleural fluid after that time. Similar findings have been reported in other cases.[25] The high concentrations that persist in the pleural fluid suggest that the local treatment should be applicable in cases of empyema due to organisms which are susceptible to concentrations of penicillin that cannot be sustained by parenteral therapy even with massive doses. Penicillin levels in pleural fluid after systemic therapy are irregular and are usually lower than in the blood.[26]

In the present case the empyema was probably the result of extension from a chronically infected and bronchiectatic lung. The pulmonary process was bilateral and was considerably improved in the course of treatment. Local therapy by inhalation of aerosolized penicillin undoubtedly offers a better method of treatment for the intrapulmonary and bronchial lesions in such cases.

One should not conclude from this case that most infections due to gram-negative bacilli should be treated with penicillin. Indeed, only a small proportion of such organisms are sensitive to concentrations of penicillin that would be affected by any form of penicillin treatment now in use. Further study is necessary to determine how frequently such sensitive gram-negative bacilli are encountered clinically. If penicillin treatment of any gram-negative bacillus infection is undertaken, the organism should be tested for its sensitivity and the penicillin used or continued only if the organism is sensitive to the concentrations of the antibiotic that can be maintained at the site of the infection. Gram-negative bacilli are also likely to produce large amounts of penicillin inactivating substances in the presence of penicillin, and this must also be taken into account in gaging the size and frequency of local doses in infections with such organisms.[27]

SUMMARY

A case of empyema due to a gram-negative bacillus was successfully treated by aspirations and intrapleural instillations of penicillin alone. The organism was much more sensitive to penicillin than to streptomycin.

23. Marion E. Lamb, Cornelia Ann Eddy, Joan B. Daniels and Kenneth M. Wheeler assisted in the bacteriologic studies of the organism, and Clare Wilcox gave technical assistance.

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The Origin of Syphilis.—History is punctuated by the appearance from time to time of plagues and epidemics which, however disastrous in their effects, acted as a stimulus to the medical profession. The black death was one such visitation; the sweating sickness was another. In 1495, when Charles VIII of France laid siege to Naples, there broke out in the city a new and dreadful disease consisting of widespread skin eruptions and ulceration, with great destruction of all the tissues, causing many deaths and persisting for years in those who survived the initial illness. It was said to have been brought to the Spanish occupants of Naples by the sailors of Christopher Columbus, who had acquired it in the West Indies. The Spaniards, in turn, passed it on to the French invaders. The French called it the Neopolitan disease, the Spaniards named it the French disease, while Fracastorius was the first to apply to it the name "syphilis," which it retains to this day. Whether syphilis was known before that date is still open to argument; certainly there is no mention of it by the ancient writers, and if it did exist it was in a mild form. In any case it was either reactivated or introduced at the siege of Naples, where it at once assumed epidemic proportions and a severity which has never since been equaled.—Guthrie, Douglas: A History of Medicine, Philadelphia, J. B. Lippincott Company, 1946.

CHRONIC NASAL OBSTRUCTION

Its Causes and Treatment

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Chronic nasal obstruction is one of the common complaints for which a patient consults the rhinologist. Many such patients travel from one physician to another because they fail to receive relief from the obstruction and its associated discomforts.

The anatomic deformities, either developmental or the result of injury, are easily diagnosed. These include deviated nasal septum, nasal spurs, bullous turbinates and atresia. The treatment of such conditions is surgical.

Abnormal growths may also produce nasal obstructions. Adenoidal hypertrophy, chondroma, papilloma, osteoma and nasopharyngeal fibroma are benign lesions which may occlude the nasal or epipharyngeal airway. Surgical removal is the method of choice. Nasopharyngeal fibroma treated with x-rays or radium before surgery reduces the vascularity of this tumor. Cancers of the sinuses occasionally occur and eventually involve the nasal passages. Discussion on such cases, which require radical surgery and irradiation, is not within the scope of this paper.

Chronic inflammatory lesions of the mucous membrane of the nose and paranasal sinuses eventually lead to fibrosis, hypertrophy and hyperplasia in the tunica propria, resulting in a thickened membrane which shrinks poorly on treatment with astringents. Polypoid degeneration may occur in long-standing chronic infections of the sinuses. In such cases many rhinologists believe this is due to sensitization to the bacteria harbored therein. Measures to insure good ventilation and drainage must be instituted if desirable results are to be obtained. Removing polypoid, degenerate tissue and making intranasal openings into the sinuses are the most conservative surgical measures that are adequate to restore ventilation and drainage. Occasionally complete removal of the sinal mucosa is necessary.

Vasomotor rhinitis secondary to general systemic disturbances such as menstrual disorders, hypothyroidism and diseases associated with or involving the sympathetic nervous system must not be overlooked. Treatment of the primary cause will suffice to relieve the nasal congestion.

The physician frequently finds himself faced with vasomotor rhinitis for which no etiologic factor can be found. Some investigators call this plain vasomotor rhinitis, hyperesthetic rhinitis, perennial rhinitis, physical allergy and the like. In some of these types sooner or later a nasal allergy may develop, but at this stage they cannot be so diagnosed. Many methods of treatment have been used, including the application of phenol or other acids for cauterization, electrocoagulation and zinc ionization. Since I have obtained such excellent results by the injection of sclerosing agents, I consider this form of treatment far superior to the older methods and use it exclusively now in the nonallergic, nonspecific obstructive type of vasomotor rhinitis.[1]

From the Carle Hospital Clinic.

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There is a large group of patients who definitely belong to the allergic classification. Some of these, especially relatively early in their sensitization, will show only engorged, somewhat reddened turbinates, with some watery secretion frequently containing eosinophils, which shrink well with astringents—a vasomotor type of rhinitis. Others, well along with sensitization, will exhibit pale boggy turbinates with an excessively watery or mucoid blanket on the mucous membrane and frequently with polypi in the meatuses. A superimposed secondary infection of the sinuses may be present as the result of a poorly functioning mucous membrane and stagnation or inadequate ventilation.

In order to foster a more thorough understanding of allergic rhinitis the remainder of this paper will deal with its causes, effects and treatment. What are the biochemical factors involved in the production of allergy? It was shown four or five years ago that during injury and anaphylaxis histamine is liberated. Rocha e Silva and Essex [2] removed the adrenals from guinea pigs and found a definite increase in the degree of emphysema after the injection of trypsin. They concluded that the main liberation of histamine takes place when the antigen comes in contact with lung tissue. Kellaway and Trethewie [3] state that the anaphylactic response of smooth muscle must be regarded as a consequence of the release of histamine (quick response) and the release of a substance slower to react (delayed response). Trethewie [4] believes that trypsin liberates the "slow reacting substance." Katz and Cohen [5] used heparinized blood collected from persons with allergies to pollen and dust and the specimens were placed in vitro with extracts of their respective allergens. A definite shift of histamine, previously bound to cells, to the plasma was observed; in most cases the increase of histamine in the plasma ranged from 168 to 900 per cent. Katz [6] also reported that histamine was released from the skin of allergic patients when an extract of the allergen came in contact with the living cells of the lower layers of the skin which had been exposed beforehand by the application of cantharidin and subsequent removal of epidermal layers. Zon, Ceder and Crigler [7] reported that inflammatory lesions of the skin show from two to ten times as much histamine as normal skin. Gotzl and Dragstedt [8] have shown that a decrease in the histamine content of the skin, liver and lungs occurred in rats after thyroidectomy and that an increase of the substance occurred in these animals on feeding them thyroid. Ramirez, Lawton and Dragstedt [9] found that injections of trypsin produced considerable amounts of histamine in the blood. Rose [10] states that allergic patients show enormous fluctuations of blood histamine in the course of many months or years in contrast to

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that occurring in normal persons. Randolph and Rackemann [11] found no correlation between the eosinophil and the histamine content of the blood. Rocha e Silva [12] states that the liberation of histamine occurs by the activation of cellular cathepsins, since a proteolytic enzyme like trypsin has been able to duplicate all the features of anaphylactic shock when injected. He bases his argument for this hypothesis on (1) substances which would act indirectly by activating cell cathepsins, (2) substances which as proteolytic enzymes and animal poisons might act directly by rupturing the peptide linkages of histamine with the cell proteins and (3) the fact that it has been definitely proved that an increased excretion of nitrogen follows anaphylactic shock.

Rocha e Silva [13] reviews the pharmacologic properties of simple compounds of histamine with amino acids. If the imine :NH radical of arginine or the imidazole ring of histidine would compete with a like :NH group of the imidazole ring of histamine, the imine :NH radical would be the anchoring group of histamine to the chemical receptors of smooth muscle. In this way the toxic effects of the drug and its ability to anchor to the cell receptors can be separated. Five compounds of histamine with amino acids were developed at the Rockefeller Foundation by blocking the $-NH_2$ amine radical through chemical combination with carboxyl groups of amino acids. A definite antihistaminic effect can be produced of the same order of magnitude as that of certain arginine derivatives and histidine hydrochloride.

Every allergic manifestation that is accompanied with sufficient mucosal swelling due to inhalants in the nose is accompanied by a new inoculation with undigested foreign protein. As Frackelton [14] pointed out, when foreign substances reach the nose of an allergic person the resulting manifestation of allergy causes a serous exudate from the mucosa, which in turn becomes swollen and boggy. The liberation of histamine or histamine-like substances favors the engorgement of capillaries and lymph channels and reduces cellular oxidation and nutrition. Pressure produces reflex effects on the vascular and nervous systems. Offending particles are caught and carried to the tunica propria to constitute allergic inoculation for the perpetration of hypersensitivity to those specific protein substances. Prolonged infection leads to irreversible changes in the nasal and sinal mucosa. The tissue undergoing allergic changes more often returns to normal when the hypersensitivity is relieved. With our present knowledge of allergy it appears that the histamine released into the tissue spaces acts on the arterioles and capillaries, producing an arteriolar constriction and capillary dilatation. In addition the permeability of the capillary walls is increased, and localized edema then occurs.

Phillips [15] believes that it requires about two seasons of exposure to a newly encountered pollen to induce clinical sensitivity.

Cook [16] considers hyperplastic sinusitis a special sensitization reaction to bacterial invasion plus existing vasomotor changes. Food allergy in his experience was rare, but air borne factors were common. He states that the causative organisms in 50 per cent of the cases were different deeper in the tissues than those found on the surface by swabs and irrigations. He also asserts that primary foci were found in 85 per cent of his patients with infective asthma, and the sinuses, especially the antrums, were the most common foci. Gelfand [17] found 46 allergic cases out of 52 representative cases of perennial rhinitis. Multiple sensitivity was present in the vast majority of patients. Inhalant allergens were most frequently responsible for rhinitis, but Gelfand could demonstrate food sensitivity in 11 cases. Hansel [18] says that the incidence of allergy in diseases of the ear, nose and throat is about 16 per cent and among all cases of nasal and sinal disease it is about 40 per cent. Oppegard [19] found that 30 per cent of the cases of nasal disease show local allergic changes which are often associated with other allergic manifestations. Swann [20] also found that 20 to 30 per cent of all sinal disease was on an allergic basis. Vaughn [21] discovered that 60 per cent of the persons in a community of 508 suffered from mild or major allergy. Bray [22] states that one third of an otolaryngologic practice consists of nasal allergy. Blanks [23] found that over 1 per cent of the armed forces require care for allergy. Hyde and Kingsley [24] reported that 0.8 per cent of 60,000 men in selective service had allergy severe enough to disqualify them for the service. Fox and his associates [25] found that a high percentage of the persons with frequent colds, intermittent nasal blockage, pharyngitis, recurrent laryngitis and conduction deafness become manifestly allergic at some time. They term these borderline allergic patients and state that no eosinophilia is present in these early cases. Of 1,200 patients with frequent colds who underwent treatment to acquire immunization to colds, they found that 80 per cent were allergic or were from allergic families. Kuhn and Linton [26] state that mucosal testing produced an imposing list of varying allergic symptoms. They state that only 47 per cent of the cases of allergy can be treated with allergic management alone; 27 per cent require allergic plus local treatment, 21 per cent may be satisfactorily treated with allergic control and surgery and about 4 per cent fail to show improvement. Mohun [27] presented 20 cases of vasomotor rhinitis associated with pregnancy and concludes that vasomotor rhinitis occurring during pregnancy appears to parallel and to be caused by the accumulation of estrogen in the body.

ALLERGY IN PEDIATRICS

Todd and his associates,[28] in a study of 60 children under treatment for allergy, found that 75 per cent had gross orthodontic deformity, and the earlier the allergy occurred in life, the greater the deformity. Among

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the 455 cases at the pediatric clinic in St. Louis, Hansel [29] found that eosinophilia of the nasal and sinal secretions was the most dependable sign of allergy and that by cytologic study it was possible to determine the clinical course of the disease in relation to acute, subacute and chronic complicating infections. He states that the indications for tonsillectomy and adenoidectomy are the same with the allergic child as with any other, but the surgery should be done only after control of the allergy. He has been unable to find any relationship between blood eosinophilia and clinical symptoms or the number of eosinophils in the nasal smears. Nasal allergy may persist without asthma, but often an allergic bronchitis appears, frequently as a forerunner of asthma, in children. Asthma may also appear in an acute form after an infectious disease, especially after whooping cough or measles. Criep [30] estimates that at least 10 per cent of infants and children are at one time or another in need of allergic treatment and that, contrary to the belief of some, children do not outgrow allergies although there may be spontaneous remissions. Clein [31] stresses the fact that many children undergo tonsillectomy and adenoidectomy without any differentiation being made between allergy and infection. Piness and Miller [32] decried the incautious resort to tonsillectomy and adenoidectomy in the allergic child. Of 685 allergic children, 17 per cent had their first allergic symptoms after such an operation. Barnett and Carnahan [33] believe that removal of the tonsils and adenoids may aggravate symptoms in the child with uncontrolled allergy. Of 200 children who were candidates for the removal of tonsils and adenoids Hansel and Chang [34] found a definite allergy in 13 per cent; in only 50 per cent were the symptoms typical. Hansel [35] stresses that atypical types of nasal allergy are often obscured by the prominence of some other condition in the clinical picture, such as a discharging ear, swelling of the palate or cough.

Only a few years ago, when little was known about allergy, a great deal of radical surgery was performed on the sinuses, with disappointing results. Consequently the layman became skeptical of the benefits to be derived from such an operation. The reason for many of these failures was the presence of an allergic constitution which, not being controlled sooner or later produced a recurrence of the patient's symptoms, no matter how perfectly the sinal surgery was performed. True, primary sinusitis can and certainly does occur and may require surgery, but physicians should be suspicious and investigate chronic sinusitis from the standpoint of an allergic background on which a superimposed infection has infiltrated the upper respiratory tract with its edematous mucous membrane fertile for bacterial invasion. Arbuckle,[36] Harris,[37] Grove and Farrior,[38] Williams and Mousel,[39] Swann,[20] Hansel,[18] Fox and his associates,[25] Clark and Rogers,[40] Shambaugh [41] and Weile [42] have aptly stressed the importance of this precaution in the past few years.

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TREATMENT

First and foremost in importance is the removal of the allergens from the environment of the patient to be treated. Since this is not always feasible, a discussion of the literature on treatment by medicaments is reviewed. In 1938 a preliminary report by Bloom [43] claimed that 50 to 100 per cent relief was obtained in 29 cases of hay fever by the use of potassium chloride. The rationale of such treatment was based on the theory that allergy is a disturbance of electrolytic metabolism. He gave 5 grains (0.32 Gm.) of potassium chloride in water three times daily. Stoesser and Cook [44] treated asthmatic patients on a low salt diet with relief and claimed that the symptoms became worse when the amount of salt was increased. In 1939 these authors [45] stated that the addition of potassium chloride to a low salt diet relieved asthma in milder cases. They were also enthusiastic about artificial fever therapy with a low salt diet in persons with asthma. Abt,[46] Bloom and Grauman,[47] Smith and Steffenson [48] and Parker [49] all reported that a good degree of benefit was obtained with potassium chloride therapy. There are as many investigators who claim that there is little or no benefit to be derived from this form of treatment (Engelsher,[50] Harley,[51] Harsh and Donovan,[52] Spain, Westcott and Gaillard,[53] Kern [54] and Furstenberg and Gay [55]); apparently the later investigations with larger series of cases have put the potassium salts out of the therapeutic armamentarium.

A wave of enthusiasm for vitamin C or ascorbic acid therapy has had its crest. Epstein [56] reported favorable results in the treatment of asthmatic patients. Heise, Martin and Schwartz [57] found that giving 200 mg. of the drug intravenously reduced the cutaneous reactions

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of patients sensitive to tuberculin. Wagner,[58] Goldsmith and his associates,[59] Holmes,[60] Shaw and Thelander,[61] Diehl[62] and Hagiescu and his associates[63] have all reported that good results were obtained by the intravenous administration of up to 500 mg. of the drug. Against these favorable reports are the thorough later investigations by Newbold,[64] Hunt,[65] Eichbaum and Rocha e Silva,[66] and Hansen-Pruss and Goodman;[67] the latter authors observed the effects of ascorbic acid in large doses in treatment of over 100 asthmatic patients and were definitely of the opinion that the patients were not helped. Dees[68] is of the same opinion.

Short wave therapy, which has been used indiscriminately in intranasal conditions, is certainly of no benefit in allergic rhinitis (Brighton and his associates[69]).

In a preliminary report Roth and Horton,[70] who treated 150 patients with histaminase, state that it offered effective therapeutic results in certain cases of clinical hypersensitivity. Keaney[71] and Miller and Piness[72] were unable to observe any benefit obtained by its use.

Young and Gilbert's[73] study revealed that aminophylline counteracted the bronchospastic effect produced by histamine on the guinea pig. Emmelin and his associates[74] reported the antihistaminic effect of xanthine derivatives (xanthine theobromine, caffeine, theophylline and aminophylline) as well as their antianaphylactic effect on sensitized smooth muscle. One of the latest of these derivatives to be investigated which promises to have a place in the treatment of allergy is nethamine (*l*-*N*-ethylephedrine) hydrochloride. Friedman and Cohen[75] gave 2 grains (0.13 Gm.) daily and state that it is less toxic than ephedrine and causes no change in blood pressure and fewer side effects. They report that 48 per cent of their asthmatic patients and 61 per cent of those with hay fever obtained relief with this drug. Hansel[76] has administered ¾ grain (0.05 Gm.) of nethamine hydrochloride and 2 grains (0.13 Gm.) of theophylline isobutanolamine to 250 patients with nasal allergy and bronchial asthma with most satisfactory results. In addition to the tablet form he has given 10 cc. ampules containing ¾ grain (0.05 Gm.) of nethamine hydrochloride and 3¾ grains (0.24 Gm.) of theophylline isobutanolamine for intravenous and intramuscular injections. The intravenous administration is given in 50 or 100 cc. of isotonic solution of sodium chloride. Recently he has been giving suppositories of theophylline 4 grains (0.26 Gm.) and nethamine hydrochloride 1 1/12 grains (0.07 Gm.).

Epinephrine in peanut oil has given much longer symptomatic relief to patients with respiratory allergic symptoms than have the aqueous forms of epinephrine (Kenney and his associates[77] and Murphy and Jones[78]). Unfavorable reactions appeared in 4 patients receiving slow epinephrine; Cohn[79] questions the peanut oil as a possible cause.

Good results in patients given twenty-five to forty doses of histamine phosphate have been reported by Girling.[80] Of 73 patients treated for nasal allergy, 70 received complete relief, 2 were slightly better and 1 was unimproved. Administration of the drug completely relieved 15 of 20 patients with lower half headache, 5 of 6 patients with asthma and 5 of 14 patients with associated deafness. In summary he states that the treatment seems to be of definite value but that it is too early to speculate as to the permanence of cure. Gant and his co-workers[81] report the oral use of histamine phosphate in 30 cases of vasomotor rhinitis. In 28 of these cases it produced, when its administration was repeated regularly, an immediate beneficial effect. Symptoms ceased within ten or twenty minutes after the dose of histamine was taken by mouth, and relief lasted several hours. There were some unpleasant side effects. The dosage given varied from 5 to 10 drops of a 1 : 1,000 or 1 : 100 dilution of the drug. Williams[82] in his review of the literature and in his investigation on the intrinsic allergy syndrome is an ardent supporter of histamine desensitization therapy. In perennial vasomotor rhinitis he reported 55 per cent good results, 14 per cent fair and 31 per cent failures with histamine and about the same results with niacin. Horton[83] has been encouraged by the results of its use in cases of Ménière's syndrome and histaminic cephalgia. Williams also mentioned 15 patients with vasomotor rhinitis whom he treated with Kendall's extract of whole adrenal cortex plus 0.1 cc. of a 1 : 10,000 dilution of epinephrine twice daily. He states that a decided diminution in the swelling of the nasal mucosa occurred in 14 of the patients. He suggests that there may be an insufficient supply of these hormones in cells which react to produce the physical allergy syndrome.

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Loew and his associates [84] have carried on animal experiments with new antihistaminic preparations, synthetic benzhydryl alkamine ethers, the most effective one being beta-dimethylaminoethyl benzhydryl ethyl hydrochloride, or benadryl. They found it effective in much smaller doses than aminophylline in alleviating bronchial constriction caused by anaphylactic and histaminic shock. Furthermore, the drug diminished the depression effects of histamine and acetylcholine. They state that it has a low toxicity. McElin and Horton [85] found that benadryl (1) decreased the cutaneous vasodilating action of histamine, (2) alleviated nasal congestion induced by vasodilatation of the mucous membrane caused by histamine, (3) depressed the wheal and flare response in cases of hypersensitiveness to cold and (4) depressed the gastric response to histamine. Of 8 cases of vasomotor rhinitis, excellent results were obtained in 5, good results in 2 and no benefit in 1. In 22 patients with true hay fever 19 obtained excellent relief, 2 good results and 1 no benefit. Oral dosage of the drug ranged from 50 to 500 mg. per day; intravenous administration ranged from 10 to 120 mg. in a dilution up to 60 mg. per hundred cubic centimeters of isotonic solution of sodium chloride. Persons who were relieved with benadryl had to continue such therapy in order to remain free from symptoms. No abnormal changes occurred in the erythrocyte, leukocyte and differential blood counts, the hemoglobin content and the results of urinalysis or in blood platelet counts, bleeding time, clotting time or blood urea determination, in the group studied. No serious toxic effects were noted. The side effects most commonly reported by these authors were sleepiness, dizziness, dryness of the mouth and a feeling of nervousness, none of which they found severe enough to necessitate discontinuance of the administration of the drug. Koelsche and his associates [86] treated 83 patients with hay fever or asthma or the two combined. Benefit was reported in 69 per cent. Only 33 per cent of those with asthma alone were benefited. Some patients complained of the side effects to such an extent that they stopped using benadryl. Williams [87] found that the average patient who had physical allergy of the head could be kept practically free from symptoms on 300 mg. of the drug daily in six divided doses during the daytime. Ten of 12 patients with perennial vasomotor rhinitis obtained 90 per cent relief. Logan [88] believes that 2 mg. per pound of body weight is an adequate dose for most children.

PROCEDURE AND RESULTS IN 170 CASES INVESTIGATED

True seasonal types of allergy were excluded from this study. Only patients complaining of prolonged, constant or perennial nasal symptoms were studied in this investigation. A thorough history was taken. Besides an examination of the ears, nose and throat, nasal smears, a complete blood count, x-rays of the sinuses and skin tests for allergy were made. Where associated gastrointestinal symptoms or other complaints were present the patient was referred to the department of internal medicine for a complete physical examination, x-rays of the chest, gastrointestinal tract and gallbladder, a determination of the sedimentation rate of the blood and other laboratory work as found necessary. This was important in such an investigation in order to rule out other conditions which might be producing the symptoms and to correlate any other abnormalities observed. Close cooperation between the departments of allergy and otolaryngology was carried out in diagnosing and treating these patients. A discussion of the method of treatment will be given in detail subsequently in this report.

TABLE 1.—*Nasal Allergy (Seasonal Nasal Allergy Excluded)*

	Percentage of Patients
(*a*) Types of Offending Allergens	
Due to inhalants alone	23
Due to ingestants	27
Due to a combination of inhalants and ingestants	50
(*b*) Nasal Smears Positive for Eosinophilia	70
0-10 per cent eosinophilia (considered negative)	30
15-25 per cent eosinophilia	24
30-50 per cent eosinophilia	13
50-75 per cent eosinophilia	20
Over 75 per cent eosinophilia	13
(*c*) Relationship of Pus Cells to Allergy in Nasal Smears	
None or only a few pus cells	43
Many pus cells	57

TABLE 2.—*Data on Comparison of Eosinophilia in 170 Allergic Patients*

	Total Series, per Cent	Associated Symptoms: Gastrointestinal per Cent	Associated Symptoms: Asthma, per Cent
Blood Eosinophilia			
3 per cent or less	55	43	44
4 to 7 per cent	30	57	28
8 to 15 per cent	15	0	28
Nasal Smear Eosinophilia			
0 to 10	30	29	32
15 to 50	37	28	40
50 or over	33	43	28

No relationship was found between eosinophilia and the number of allergens to which the patient was sensitive.

No association existed between the amount of blood or nasal eosinophilia and the degree of cutaneous reaction to the skin tests with allergens.

Among this series of patients whose chief complaint was nasal blockage with its associated symptoms, skin tests revealed that in 23 per cent it was due to inhalants, in 27 per cent to ingestants and in 50 per cent to a combination of inhalants and foods (table 1*a*). This is contrary to the belief of many allergists who state that the majority of nasal symptoms are due to inhalants and that gastrointestinal disturbances are due to food allergens.

Nasal smears positive for eosinophils occurred in 70 per cent of these cases (table 1*b*). This percentage would have been higher, I am sure, if smears had been repeated in those cases where the first one was negative.

Thus a positive single smear is indicative of allergy, but a negative one does not rule it out. Pus cells were found in 57 per cent of the smears (table 1*c*). No correlation existed between blood eosinophilia and that

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shown by positive nasal smears. However, there may be some tendency for blood eosinophilia to be raised from 8 to 15 per cent in some patients with associated asthma (table 2). Neither was any relationship found between eosinophilia and the number of allergens to which the patient was sensitive or the degree of skin reaction

TABLE 3.—*Analysis of the Symptoms Associated with the Rhinologic Allergic Manifestations in 170 Patients*

	Percentage of Patients
Asthmatic or chronic bronchitis	27
Types of allergens present in this group	
Ingestants	15
Inhalants	33
Both inhalants and ingestants	52
Gastrointestinal symptoms	8
Types of allergens present in this group	
Ingestants	36
Inhalants	11
Both inhalants and ingestants	53
Middle ear symptoms	13
Hoarseness (chronic and recurrent)	7
Pharyngitis (chronic)	10
Headaches	23
Anosmia	7
Eye symptoms	7
Ménière's or pseudo-Ménière's syndrome	3
Negative skin tests (allergy confirmed by symptomatology, history and elimination procedure)	3

Besides the complaint of nasal blockage, table 3 summarizes other symptoms and results. Asthmatic attacks occurred in 27 per cent of these patients: there was sensitivity to both inhalants and ingestants in 52 per cent of this group, inhalants were responsible in 33 per cent and ingestants alone in 15 per cent. Gastrointestinal disturbances, such as belching, cramping and bloating, occurred in 8 per cent of the total series: ingestants and inhalants were responsible in 53 per cent of these patients, ingestants alone in 36 per cent and inhalants in 11 per cent. Chronic catarrhal otitis media was present in 13 per cent of the total series, hoarseness in 7 per cent, chronic granular pharyngitis in 10 per cent, headaches in 23 per cent, anosmia in 7 per cent and Ménière's or psuedo-Ménière's syndrome in 3 per cent.

TABLE 4.—*Relationship of the Degree of Paranasal Sinal Involvement to the Time Since the Onset of Allergic Symptoms*

	Percentage of 170 Patients	
Sinuses	Symptoms Present Less Than 2 Yr.	Symptoms Present More Than 2 Yr.
Clear	16	7
Grade 1 cloudiness	5	13
Grade 2 cloudiness	7	33
Grade 3 cloudiness	..	13
Grade 4 cloudiness	..	6
Total sinuses clear	..	23
Total showing grade 1 to 4 edema and/or hypertrophy of sinal mucous membrane		77

Three per cent of the 170 patients had negative skin reactions, but allergy was confirmed by their symptomatology and history plus an elimination diet.

The appearance of the turbinates may be diagnostic of an existing allergy. In this study 53 per cent of the patients had pale, boggy turbinates. Polyps were frequently seen. The chronically congested, reddened turbinate which shrinks well with astringent solutions must be suspected of allergy until proved otherwise. This vasomotor type occurred in 44 per cent of the patients. Only 3 per cent showed clinically a hypertrophic rhinitis.

It is interesting to note that 20 per cent of the patients gave a history of previous nasal or sinal surgery, including submucous resection, diathermy, cauterization, sinusectomies and nasosinal openings. Some had received radium and x-ray therapy to the nasal tissues. One patient, for example, stated that he had gone through ten previous operations on the nose, including the removal of polypi on several occasions. He appeared at the clinic expecting to remain for further nasal surgery. His nose was occluded with polypi. Nasal smears revealed 70 per cent eosinophilia. Cutaneous tests showed a reaction only to dog dander. After elimination of his eight dogs from his immediate environment the polypi and nasal blockage disappeared. That was eighteen months ago and to date he has remained symptom free.

TABLE 5.—*Results of Regimen in Treatment of 170 Patients with Nasal and Associated Allergic Symptoms (Seasonal Allergy Excluded)*

		No. of Patients	Per Cent
1	Complete relief or decided improvement by eliminating allergens	107	63.0*
	Desensitization with specific allergens	12	7.0*
2	Control of allergens plus nasal surgery	29	17.0*
	Resection of septum	12	7.0
	Septum resection plus other intranasal surgery	16	9.4
	Caldwell-Luc operation	1	0.6
	Polyps in 38 patients; disappeared without surgery	22	58.0
3	Histamine desensitization on patients not relieved by methods 1 or 2 (22 patients); improved	4	2.3*
	Improved	4	18.0
	Unimproved	18	82.0
4	Nicotinic acid given 18 patients not relieved by methods 1, 2 and 3	18	11.0
	Associated dizziness improved in 1 patient	1	0.0
5	Injection of a sclerosing agent (sylnasol) into turbinates of 18 patients not satisfactorily relieved by preceding methods; benefited	14	8.2*
	Great improvement or complete relief	11	61.0
	Moderately improved	3	17.0
	Unimproved	4	22.0
6	No benefit (patients still using vasoconstricting nasal solutions for temporary relief)	4	2.3*

* Percentages which total the complete series; other numerals give breakdown of figures with asterisk.

There is a rather striking relationship between the condition of the sinuses and the length of time since the onset of nasal symptoms (table 4). Clear sinuses were present in 23 per cent of the series. Grade 1 to 4 edema and hypertrophy of the sinal membranes occurred in 77 per cent. Note that clear sinuses, as indicated by transillumination and x-ray study, were found in 16 per cent and grade 1 to 2 edema in 12 per cent of patients whose symptoms had been present less than two years. Contrast this picture with the 65 per cent showing of cloudy sinuses by those patients whose nasal complaints had persisted longer than two years. Furthermore, the degree of sinal involvement was more pronounced in the latter patients. In my opinion the edema and poor ventilation due to nasal allergy make a good hotbed for repeated infection and eventually lead to pathologic changes which result in a poorly functioning mucous membrane. If one finds all the sinuses cloudy to transillumination and x-rays one can dog-

matically state that such a patient is a victim of an allergic constitution. The patients frequently have a secondary infection in these sinuses. Many of them, as has been pointed out previously, have gone through sinal operations with little if any benefit in the past. Why? Because the allergic condition has not been eliminated or controlled. Studies on allergy should be done, and the patient should be put on a strict allergy regimen. For a large majority of the patients resort to surgery may not be necessary, but, if indicated, it should be confined to the conservative measures needed to insure good ventilation and drainage. If only one sinus or a unilateral group of sinuses shows cloudiness it is most probably due to infection rather than allergy.

The treatment consisted in first eliminating the allergens as far as this was possible. In this series 63 per cent were completely relieved or appreciably improved by this regimen alone. Desensitization with specific allergens relieved another 7 per cent. One per cent ephedrine in isotonic solution of sodium chloride or 0.25 per cent neosynephrine-sulfathiazolate 0.6 per cent solutions were used to give temporary relief until the allergens could be controlled. The use of benadryl (50 mg. three or four times daily) in temporarily alleviating the nasal symptoms has been somewhat encouraging in the series studied. A full report on this antihistaminic drug will be forthcoming soon in the *Archives of Otolaryngology*. It was necessary to do a submucous resection of the nasal septum on 7 per cent of the patients. Submucous resection and intranasal surgery were necessary on 9.4 per cent. Only 1 patient required the Caldwell-Luc operative procedure. Of patients in whom septal deformities were present 39 per cent did not require any surgery. The nasal polypi disappeared under an adequate allergy regimen in 58 per cent of those patients with such polypi. An attempt at desensitization with histamine derivatives (hapamine [89]) was tried on the 13 per cent not relieved by the two previous procedures. Only 2.3 per cent of this group were improved. Eighteen patients received no relief from the allergic symptoms by the use of nicotinic acid in doses of 50 mg. three times daily over a period of two to four months. However, 1 patient was relieved of his dizziness. Nadin [90] and aminophylline were given to patients with an associated asthma in conjunction with the allergy regimen. Moderate to great symptomatic relief from asthma was obtained with these drugs. Benadryl 50 mg. three to four times daily has some promise of alleviating this acute allergic manifestation temporarily. When all the foregoing measures fail, I have resorted to injection of the turbinates with sclerosing agents. As I reported in my original publications [1] on this form of therapy, it gives excellent results in chronic obstructive rhinitis not due to anatomic or truly allergic factors. I warned then, and it is still my belief, that the use of sclerosing agents should not be considered in treating allergic rhinitis until it is certain that the methods of allergic control have failed to give relief. In this series only 14 patients were treated with submucosal injections of the turbinates after the other measures had failed. Eleven received excellent results and 3 were moderately relieved for nine months or longer. Four failed to respond to the injections into the turbinates. The 5 patients with hypertrophic rhinitis were not among this group. By following the treatment procedure as just outlined, only 2.3 per cent of the patients in the whole series failed to obtain satisfactory results, including the disappearance of such associated symptoms as headache, gastrointestinal disturbances, chronic laryngitis and anosmia. The chronic suppurative otitis media of 5 patients cleared up after an allergy regimen and local treatment were instituted. There was no appreciable increase in hearing, as indicated by audiograms, in patients with an associated chronic catarrhal otitis media.

89. A chemical combination of histamine and despeciated horse serum globulin.

90. An enteric-coated tablet containing ⅙ grain (0.01 Gm.) of water soluble iodine.

SUMMARY

Contrary to general belief, this series revealed that about one half of the cases of chronic nasal allergy were due to both inhalants and ingestants, approximately one fourth were due exclusively to inhalants, and a like number were due to foods alone. Inhalant allergens must not be overlooked as the cause of associated gastrointestinal disturbances, nor ingestants as factors associated with upper respiratory symptoms.

Nasal smears positive for eosinophils are diagnostic of allergy, but a negative smear does not rule it out. There is no correlation between blood eosinophilia and nasal smear eosinophilia. Blood eosinophilia may or may not be increased in patients with an associated asthma. No relationship exists between the percentage of eosinophilia and the number of allergens to which the patient is sensitive, or the degree of skin reaction.

The time element is important in producing sinal changes in allergy. The degree of sinal involvement is roughly proportional to the length of time the allergy has existed. If all the paranasal sinuses are hazy to transillumination and x-rays, this is diagnostic of an existing allergy. If only one sinus or a unilateral group of sinuses shows cloudiness, this is almost certain to be on a truly infective basis. It has been the experience in this department that children with allergy have a tendency to have hypertrophy of the tonsils and adenoids. If obstructive symptoms are present, removal of these tissues should be done only after the allergy is brought under control. If such a procedure is followed there is no evidence that such surgery will produce an aggravation of the allergy.

Good results were obtained in controlling the symptoms of nasal allergy and the associated complaints by the following regimen:

1. The use of drugs in the nose as a spray (neosynephrine hydrochloride 0.25 per cent, privine hydrochloride 0.1 per cent, or ephedrine 1 per cent in isotonic solution of sodium chloride) and the use internally of aminophylline 3 grains (0.2 Gm.) and nadin [90] for associated asthma for temporary benefit; the use of benadryl in 50 mg. capsules four times daily for the temporary relief of nasal congestion in vasomotor and perennial allergic rhinitis has been somewhat encouraging.

2. The elimination of allergens and desensitization with specific allergens.

3. The control of allergy plus conservative nasal surgery when indicated.

4. Nonspecific desensitization with histamine derivatives; this was not found to be particularly effective but is worthy of trial when the preceding measures fail.

5. The injection of the turbinates with a sclerosing agent if all other measures fail to give the patient relief.

SURVIVAL OF HYPOTHERMIA BY MEN IMMERSED IN THE OCEAN

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The survival time of men immersed in cold water has not as yet been adequately determined, although it is a matter of practical importance when disasters occur at sea. The shortening of survival time in water is apparently related to the acceleration of body heat loss in water as compared with air, but the amount of hypothermia that can be tolerated and the reasons for greater heat loss in water have not been clearly defined. The usual explanation, that water conducts heat from the body twenty to twenty-five times more rapidly than air, is inadequate, as will be shown later.

The immersion experiments of Lefèvre [1] were, on the whole, of too short duration to establish tolerance limits. Refrigeration of patients (Fay,[2] Talbott,[3] Dill and Forbes [4]) showed that man's body temperature may be reduced by several degrees without endangering life, but the environments employed during induction were not ones that could be quantitatively characterized. Spealman [5] measured changes of rectal temperature in volunteers who were immersed in water as cold as 50 F. He did not, of course, continue his observations beyond an interval which he considered safe. Thus, the tolerance to cold water, i. e. the maximal duration of immersion in water at different temperatures with survival, has not yet been established for man.

SURVIVAL OF IMMERSION IN THE SEA

This definition of tolerance uses death as an end point, but in laboratories men cannot be exposed to the death point. There are, however, in the course of human events natural experiments which can be utilized with profit. Critchley [6] recorded that of 10 men from a torpedoed vessel only 1 survived half an hour of immersion in sea water of 29 F. (there was a large amount of field ice about). The staff surgeon of the *Takasago*, in the naval war between Japan and Russia during 1904-1905, died after one hundred and ten minutes of exposure in the sea at 47 F. In 1805 a volunteer, working for Currie, remained immersed outdoors for half an hour without clothing in water at 42 F. A corpulent man of 29, clad in indoor rig and overcoat, remained swimming for nine to fourteen hours in the sea at 30 F., while two companions died after two and one half hours of immersion. One may doubt this last case; it does not seem possible that a man, even a corpulent one, can swim for nine hours at 30 F.

To establish more precisely the relation between duration of immersion and sea water temperature of shipwreck survivors, Admiral H. W. Smith permitted examination of the reports on rescues at sea in the files of the Bureau of Medicine and Surgery, U. S. Navy, Washington, D. C. The reports originated from either the ships' doctors or the pharmacists' mates of the U. S. Navy on duty at the time of rescue. They concerned men picked up from ships of the U. S. Navy and Coast Guard, U. S. and foreign merchant ships, German and Japanese naval vessels and U. S. Navy and Army airplanes whose personnel ditched at sea.

Of the several hundred reports on file from April 1942 to April 9, 1945 only those were selected from which the following information could be gleaned: (*a*) Temperature of the sea water, or else both the date and location of either shipwreck or rescue. In the latter case, sea surface temperatures were obtained from the World Atlas of Sea Surface Temperatures, United States Navy, 1944.[7] (*b*) The exact duration of immersion in the ocean in which men were continuously covered by water up to the neck or shoulders. Clothing varied from shorts alone to full deck clothing appropriate to the latitude, including kapok jacket.

The data which fulfilled these requirements are plotted in chart 1. Each point represents at least 1 man who survived the given hours of immersion at the temperature indicated. In many cases more than 1 man survived. The continuous curve on the graph was drawn so that it lay above all the reported durations of immersion with survival, except for the one point at 47 F. for reasons to be discussed. It is possible that a few men could survive immersions for longer than the times indicated by this curve; on the other hand, many men died in shorter times.

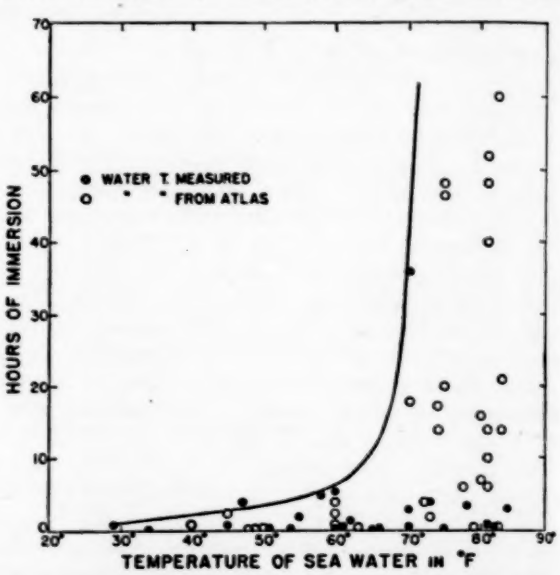

Chart 1.—Duration of immersion of shipwreck survivors in ocean waters of diverse temperatures. The data are from the files of the Bureau of Medicine and Surgery, U. S. Navy. Open circles, sea-water temperature was measured at time of rescue. Black dots, sea-water temperature was obtained from the World Atlas of Sea Surface Temperatures on the basis of date and location of shipwreck or rescue. Each point represents the survival of at least 1 man. The curve was drawn above all the reported survival times except for the one point at 47 F. which is excepted for reasons given in the text.

Several factors contributed to the shortened survival time of men who died before rescue, and it is not possible to say to what extent hypothermia was the determining lethal factor. These factors included drowning due to high seas or fainting or exhaustion, drinking sea water, wounds, injuries, depth explosions and burns. Few men died after rescue, and these

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Admiral H. W. Smith granted the author permission to examine the shipwreck reports in the Bureau of Medicine and Surgery. Lieut. Comdr. P. H. Futcher and Mrs. Groves of that office rendered assistance. Dr. E. F. Adolph gave invaluable encouragement and help.

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2. Fay, T.: Observations on Prolonged Human Refrigeration, New York State J. Med. **40**: 1351, 1940.
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7. World Atlas of Sea Surface Temperatures, Publication 225, U. S. Navy, Hydrographic Office, 1944.

usually because of some assignable cause other than hypothermia — wounds, injuries, burns or shock induced by these factors. Treatment given the rescued, in addition to that necessary for wounds and shock, varied from slow to fast rewarming, with or without hot food, or drinks or brandy. It is worthy of note that the reports mentioned no cases of upper respiratory disease. One man immersed for forty hours in water of 80 to 83 F. appeared to have bronchopneumonia. Two men, who may have been among those on rafts and exposed for two to three days, developed pneumonia after rescue; another man died of bronchopneumonia after rescue; water temperature was about 76 F. Talbott [3] also found that respiratory infections did not appear in his hypothermic patients, and Critchley [6] similarly remarked about the dearth of respiratory disease among the survivor cases which he studied.

A brief description of a few rescues will illustrate the kind of information available in some of the reports:

CASE 1.—The disaster occurred on Nov. 1, 1943. Four men were rescued from a raft after four hours of exposure; they were in good condition. Nineteen men were immersed for one to one and one-half hours; 4 were unconscious, 5 irrational, and all were suffering at the time of rescue. One of the unconscious men had clamped his teeth on his tongue, which then bled, and he had aspirated blood and salt water into the upper respiratory passages. His breathing was stertorous for thirty minutes after rescue. Another of the unconscious men was very cyanotic, more so than the others; his breathing was gasping and irregular. He recovered consciousness about one hour after rescue, but the cyanosis continued for several more hours. This otherwise informative report could not be used for the purposes of chart 1, as neither the sea water temperature nor the location of the disaster was given. The water was probably very cold, as 4 men became unconscious after only one to one and one-half hours of immersion.

CASE 2.—A ship was rammed and it sank in three minutes. Thirty survivors were picked up from rafts after exposure of one and one-half to four hours. There were 2 cases of bad burn and shock; 67 dead were identified and 48 were reported missing. Some "drowned and others died of exposure because the water was 39 F. with a high sea and a wind velocity of scale 7. Some of the survivors who held on to rope couldn't let go and rescuers had to cut frozen rope to release them. . . . It appears miraculous how the survivors could have endured such cold water. Most of them who were rescued were in an unconscious state and, when they became conscious, complained of numbness of extremities and hands. What is considered noteworthy is that there were no subsequent ill effects and they were physically fit for duty after forty-eight hours; while so many of the others in the same period of rescue were frozen to death [sic]." The rescued were placed under tepid showers and into warm beds; they were then fed hot soups and hot coffee. This interesting report could not be put into chart 1 because the extent of the immersion is not clear.

CASE 3.—On June 6, 1944, 220 men were picked up after immersion in water of 54 to 56 F. for periods up to two hours. Most suffered from the immersion; many showed effects of severe psychic trauma. There were 2 cases of drowning and several of burns. The rescued were undressed, dried, blanketed and given warm liquids and brandy. Other rescue operations have involved even more men and have required several hours for completion.

CASE 4.—A small ship, dumping defective ammunition, exploded and sank in thirty-five minutes. Fourteen men survived; 11 were in the water about half an hour, 3 more for about one hour; the water temperature was about 40 to 45 F. Only one had on a life jacket; he was badly burned and the captain had put the jacket on him; he died in the hospital. Sixteen men were reported missing. It is difficult to understand, for reasons which will become evident, how 3 men could be in water of 40 to 45 F. for one hour without life jackets and still be able to hold their heads out of the water.

CASE 5.—Twenty-three survivors were immersed in water of 47 F. for four hours. This is an unusual case, because calculations (to be made later) show that, after an exposure of four hours in water of 47 F., the rectal temperature would be below 75 F. It does not seem likely that as many as 23 men in one group could survive such a great reduction in rectal temperature. Certainly their condition at the time of rescue could have occasioned more remarks than were available in the report.

The curve in chart 1 appears to approximate a hyperbola, indicating that the product of deficiency in sea-water temperature and survival time is a constant. From this relation one may suppose that death due to the hypothermia of immersion always occurs at approximately the same body temperature and that survival time is dependent on the rate of cooling imposed by the water temperatures. The curve changes its slope rapidly at sea-water temperatures between 60 and 70 F.; unfortunately there are not enough adequate data to establish precisely this part of the curve. Further, the rectal temperatures of the survivors were not measured at the times of rescue, and thus the foregoing supposition cannot be checked.

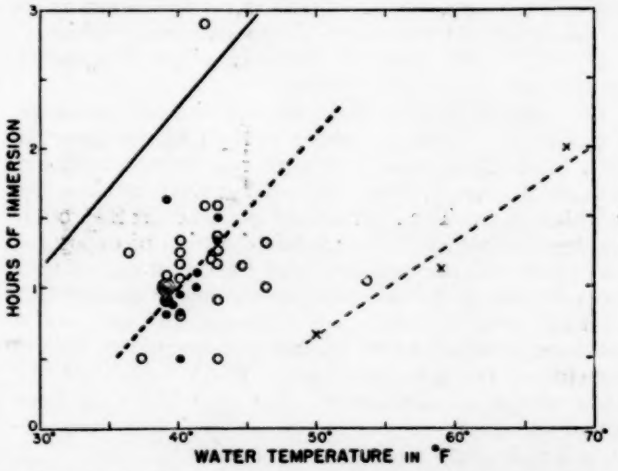

Chart 2.—Duration of immersion in experimental hypothermia. Circles, Dachau prisoners who survived; black dots, Dachau prisoners who died during or shortly after immersion (Alexander,[8] 1945); crosses, volunteers of Spealman [5] (1945). Light dashed line through Spealman's data, safe; continuous line from the curve in chart 1, few if any survivors; heavy dashed line, probable survival of 50 per cent of persons exposed.

SURVIVAL OF EXPERIMENTAL IMMERSION

Immersion experiments done on prisoners at the Dachau concentration camp have been reported by Alexander.[8] Appendix 7 in his report contains photostats of three tables and several graphs from which conditions of survival can be obtained. These data are considered as objective and valid. Body weights and heights are given for only 5 subjects (51 to 82 Kg., 153 to 183 cm.); thus, the influence of possible emaciation and weakness due to starvation is not adequately checked. The subjects were usually clothed in aviator's garb, including headgear and rubber or kapok life-jacket. Rectal and skin temperatures were measured with thermocouples. The skin thermocouple was fastened over the fifth thoracic vertebral spine and was presumably under water during the test. Those experiments in which a foam suit was worn are not included here.

Data concerning immersion time are plotted in chart 2. Care was taken to avoid duplicate representation of

8. Alexander, L.: The Treatment of Shock from Prolonged Exposure to Cold, Especially in Water, Report 250, U. S. Department of Commerce, 1945.

any experiment; thus, averages are not included in chart 2. Of the thirty-six experiments shown, only 1 man was immersed for a period longer than that given by the curve in chart 1. This man was large (82 Kg., 183 cm.) and unclothed during the test; he survived one hundred and seventy-five minutes of immersion and received subsequent diathermy over the heart. Not one of the remaining 35 was exposed as long as the times shown by the curve in chart 1. Twelve of the

TABLE 1.—*Lowest Rectal Temperatures of Dachau Prisoners Immersed in Water at 40.1 to 53.6 F.*

Rectal T., Degrees F.	Died	Survived	Per Cent Surviving
75.0-79.9	4	3	43
80.0-84.9	3	10	77
85.0-90.0	1	11	92

men in chart 2 died, 2 before removal from the water, 10 in seven to fourteen minutes after removal; of these, 3 were administered strophanthin and 2 were given artificial respiration. Five of the survivors were administered strophanthin and 4 were placed in cradles with sixteen light bulbs. There is no indication as to the postexposure treatment of the remaining subjects, and proof is not complete that any of the treatments significantly prolonged survival.

Also shown in chart 2 are the durations of exposure of Spealman's [5] subjects and a portion of the curve in chart 1. Evidently the upper line represents an outside limit of tolerance; few men will survive as long as indicated by it. The light dashed line in chart 2 through Spealman's data represents a safe duration of exposure, one which will not produce fatal hypothermia. Exposures for durations indicated by the heavy dashed line are fatal to many men. For example, an exposure of one hour in water at 40 F. can be expected to kill 50 per cent of the men immersed. These statements are made on the assumption that the head is always kept out of the water by the life-jacket, and that therefore drowning is not a factor to be considered.

TABLE 2.—*Estimated and Observed Survival Time of Men Immersed in Cold Water*

Water Temperature, Degrees F.	Computed Drop in Rectal T. (From Chart 3), Degrees F. per Hour	Computed Time for Drop in R. T. to 78.6 F., Hours	Observed Survival in Charts 1 and 2	
			Hours	Number of Men
60	3.8	5.5	2.8 to 5.5	50
58	4.3	4.7	2 to 5	59*
47	9.0	2.2	4.0	23
45	10.2	2.0	2.5	Some
42	12.0	1.7	1.6, 2.9	1, 1
40	13.0	1.5	1.4	1†

* Some men were on rafts.
† Three men are known to have died in less than one hour.

Rectal temperatures at the time of death also are given for 8 of the 12 subjects in chart 2. Careful examination of appendix 7 disclosed that additional subjects survived cooling to equal rectal temperatures (table 1). The lowest rectal temperature which was survived was 77.5 F. The lowest at which death occurred was 78.3, the highest 86.5. A patient subjected to hypothermia died at 74 F. (Fay [2]) but another survived the same rectal temperature (Talbott[3]). Other patients or inebriates have survived 75, 75.2, 75.6 and 76.4 F. (Talbott,[3] Dill and Forbes.[4]) Of the 20 subjects in table 1 having a rectal temperature below 85 F., 35 per cent died; of the 7 below 80 F., 57 per cent died. Probably no man immersed in water can survive a rectal temperature below 75 F.

Rate of fall of rectal temperature can be approximately ascertained. In four of eleven cooling curves (Alexander) the rectal temperature started to drop soon after immersion; in the remaining seven there was a delay of about a quarter of an hour before much diminution began. Spealman also found an initial delay. The reduction in rectal temperature then proceeded more or less linearly for about an hour, but in water of 68 F. or warmer the rectal temperature then leveled off (Spealman). In colder water the further course of the rectal temperature is given for only 1 subject (Alexander's figure 12 in appendix 7); after fifty minutes the rectal temperature leveled off more or less exponentially during the remaining two hours. Fall of rectal temperature during the first hour in water is plotted against water temperature in chart 3. The curve is not linear, though it may be below 60 F.

For water temperatures below 60 F. calculations made on the basis of chart 3 give reasonable times of survival. In table 2 are given calculated and observed survival times for several water temperatures on the assumption that a drop in rectal temperature from 98.6 to 78.6 F. is the limit for survival. Where calculated and observed survival times agree, it may be concluded that the rates given in chart 3, based on the first hour of immersion, may be used linearly for succeeding hours. Where the observed survival time is less than the calculated, as in water at 40 F., death occurred at a rectal temperature higher than 78.6 F., as it actually did. Where the observed survival time exceeds the estimated, as in water at 47, 45 and 42 F., either 78.6 F. was not the limiting rectal temperature or cooling proceeded exponentially after the first hour, or both. In the case of the subject surviving immersion for 2.9 hours in water at 42 F., as described in the preceding paragraph, the rectal temperature did drop more or less exponentially after the first fifty minutes to reach about 75.2 F. at one hundred and seventy-five minutes. The cooling of the 23 men who survived four hours in water at 47 F. (case 5 just described) may have followed a similar course though it is hard to believe that 23 men in one group survived a rectal temperature of about 75 F.

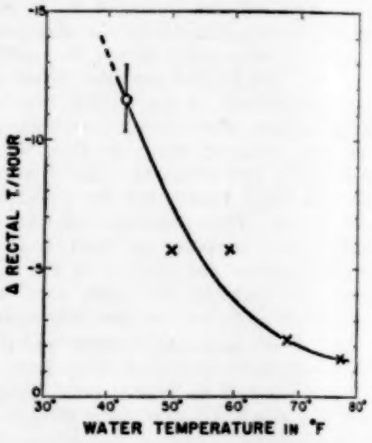

Chart 3.—Fall of rectal temperature in Fahrenheit degrees per hour during the first hour of immersion in water of diverse temperatures. Crosses, data from Spealman [5] (1945). Circle, mean of data from figures in appendix 7 of Alexander's report [6] (1945); the bar represents the standard error.

Spealman's observation that the rectal temperature ceases to fall after about one hour in water warmer than 68 F. explains why the curve suddenly rises steeply in chart 1. Apparently in water warmer than 60 to 68 F. heat production keeps pace with heat loss at a somewhat reduced rectal temperature, and possibly fatigue is the limiting factor. In colder water, however, heat loss exceeds heat production, which, in fact, becomes reduced as the body cools.

The data of Dill and Forbes [4] concerning the heat production of schizophrenic patients subjected to hypothermia are plotted in chart 4. These patients were under light anesthesia during the induction of hypothermia, and so their heat productions may not have been as high as for men immersed in the sea. Spealman

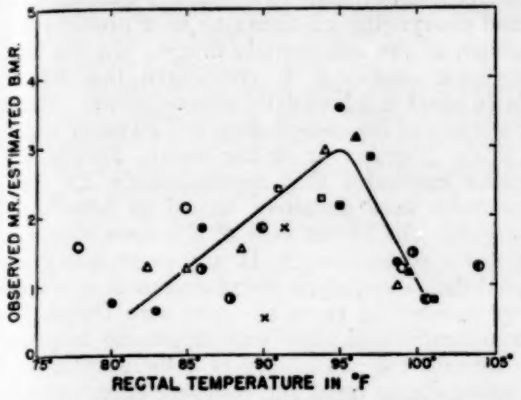

Chart 4.—Relation between the ratio of observed metabolic rate to estimated basal metabolism and the concurrent rectal temperature for refrigerated patients. Data from Dill and Forbes.[4] Each symbol represents a different narcotized patient; the narcosis had worn off at the lower temperatures.

found that heat production rose to five to six times basal instead of about three times as observed on the schizophrenic patients. The curve in chart 4, however, suggests that heat production falls off from a peak at rectal temperature of 95 F. to basal or less at rectal temperature of about 80 to 85 F. At the lower rectal temperature the patients were no longer under the influence of the anesthetic.

COMPARISON OF BODY COOLING IN AIR AND IN WATER

The relation between body temperatures and environmental temperature for both men in water and nude men sitting in air in shade (Adolph and Molnar [9]) is

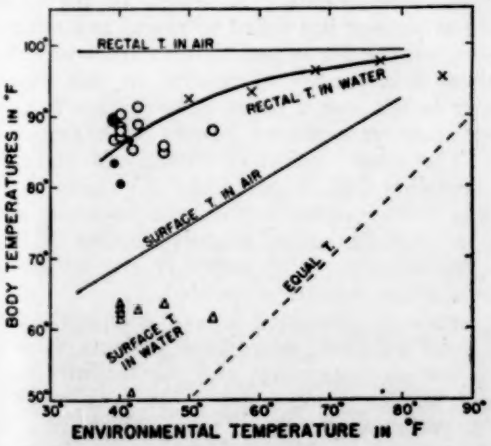

Chart 5.—Relation between body temperatures and environmental temperatures in water and in air (latter from Adolph and Molnar [9]) at the end of the first hour of exposure. Surface temperature was measured only on the back with a thermocouple (uncovered in the air experiments). Crosses, rectal temperatures from Spealman;[5] at 50 F. the rectal temperature was extrapolated to one hour from a forty minute exposure. Circles, rectal temperature of Dachau prisoners who survived. Black dots, rectal temperature of prisoners who died (Alexander [6]). Triangles, back surface temperature of these prisoners. In the air men sat nude in outdoor shade.

shown in chart 5. The data are taken at one hour of exposure. All surface temperatures are for the back alone and were measured with a thermocouple (uncovered for the air experiments). The back surface temperature of the man in the air was about the same as the mean of temperatures measured on ten different areas. It is somewhat surprising to find that the back surface temperature of the man (clothed though he be) can be 9 to 23 Fahrenheit degrees higher than the water temperature. Burton and Bazett [10] assumed that for the nude man the surface temperature was the same as water temperature in their warm bath experiments.

Chart 5 shows that in air at 40 F. the rectal temperature did not diminish within one hour and the internal temperature gradient was about 30 Fahrenheit degrees. In water at 40 F., however, the rectal temperature dropped about 11 to 12 Fahrenheit degrees within one hour and the internal gradient was either 25 Fahrenheit degrees, using the observed surface temperature, or about 47 Fahrenheit degrees, if Burton and Bazett's assumption is correct.

The difference in thermal behavior of the body in air and in water is often accounted for by saying that water conducts heat twenty to twenty-five times more

TABLE 3.—*Estimated Heat Loss from Body in Air and Water During First Hour of Exposure*

Environment	Heat Production, Calories per Hour	Storage, Calories per Hour	Total, Calories per Hour
Air, shade, 40 F.	250	400	650
Water, 40 F.			
If surface temperature = 62 F.	350	725	1,075
If surface temperature = 51 F.	350	990	1,340
Air, 60 F.	120	230	350
Water, 60 F.			
If surface temperature = 61 F.	350	535	885
Air, 70 F.	85	140	225
Water, 70 F.			
If surface temperature = 71 F.	140	200	340

Heat exchanges in air are taken from Adolph and Molnar.[9]

Heat production of men in water is assumed to average 5 × basal (5 × 70) during the first hour, except in water at 70 F., where it is assumed to be 2 × basal. Decrement in stored heat is estimated as the product of change in average body temperature (in centigrade degrees) times body weight (70 Kg.) times 0.83 (the specific heat of the body). Change in average body temperature is assumed to be the average of the changes in rectal temperature and surface temperature. Initial surface temperature is assumed to be 90.5 F.

rapidly than air. This explanation, however, is inadequate, as Bazett and Spealman pointed out to me in a discussion and as a few simple calculations show (table 3): Estimates indicate that heat loss from the body in the water is only about twice that in air, or only one-tenth the amount expected on the basis of the ratio of water/air conductivity. There are, of course, errors in the estimates of table 3, but they cannot be great enough to bring heat loss in water to more than three to four times that in air.

Table 3 also shows that in water even at 60 F. body cooling is far in excess of heat production. Hence the rectal temperature falls and survival time is limited. In water at 70 F., however, body cooling is no longer excessive and tolerance is not limited.

Although heat loss in water is only about two times that in air, and not twenty to twenty-five times, yet this 100 per cent increase must be explained. Two reasons can be brought forth: 1. The effective surface area for heat loss in the air is only 75 per cent of the

9. Adolph, E. F., and Molnar, G. W.: Exchanges of Heat and Tolerances to Cold in Men Exposed to Outdoor Weather, Am. J. Physiol. **146**: 507, 1946.

10. Burton, A. C., and Bazett, H. C.: A Study of the Average Temperature of the Tissues, of the Exchanges of Heat and Vasomotor Responses in Man by Means of a Bath Calorimeter, Am. J. Physiol. **117**: 36, 1936.

total area (Winslow, Herrington and Gagge [11]), because the medial surfaces of the legs exchange heat with each other, and the arms with the trunk; in water, heat is lost over the whole surface. 2. Because of the low specific heat of air, the layer of air immediately next to the skin is quickly warmed and is actually at a higher temperature than dry-bulb temperature (McGlone and Bazett [12]). Even a high wind does not remove all this warm air layer. On the other hand, because of the high specific heat of water the water adjacent to the surface is not warmed so much and is easily displaced. The net result is that the surface temperature is reduced more in water than in air. Consequently there is a steeper initial internal temperature gradient in water. The amount of heat flowing from the deep tissues to the surface is determined by the temperature gradient between these two regions and by the conductivity of the intervening tissues (Burton [13]). As the conductivity cannot be reduced below a minimal amount, once vasoconstriction is complete this tissue conductivity would be the same in air and in water. But because of the greater internal temperature gradient when in water there would be more heat flowing through the outer shell of the body into the water.

Because heat production does not keep pace with heat loss, the rectal temperature falls; the internal gradient has reached its limit. In water warmer than 68 F. heat production of three to six times basal can keep the rectal temperature around 95 F. In colder water, body cooling exceeds heat loss and the rectal temperature continues to fall. As this diminution proceeds below 95 F., heat production also falls off until it is only about basal in value at a rectal temperature of 80 to 85 F. Respiratory and cardiac irregularities are reported then to supervene and, if allowed to continue, lead to the death of the individual.

It should be pointed out that useful data can be secured by any one on a rescue vessel who has a watch, a thermometer and a ready wit. Eventually diverse methods of rewarming can be adequately compared.

SUMMARY

The recorded times of immersion of shipwreck survivors, on file in the Bureau of Medicine and Surgery, U. S. Navy, were plotted against the sea-water temperatures (chart 1). A curve was drawn above the highest recorded times of immersion; the curve rises steeply for water temperatures above 60 F. Analysis of data on body cooling led to the conclusion that this curve represents a limit of tolerance which probably few men can exceed and many cannot approach.

Tolerance to water at temperatures below about 68 F. is limited by the loss of body heat at a rate which exceeds heat production. The internal temperature gradient cannot be maintained, and the rectal temperature falls at a rate which becomes increasingly greater, the lower the water temperature. Once the rectal temperature falls below about 95 F., heat production decreases. Respiratory and circulatory irregularities appear, and death ensues.

11. Winslow, C.-E. A.; Herrington, L. P., and Gagge, A. P.: The Determination of Radiation and Convection Exchanges by Partitional Calorimetry, Am. J. Physiol. **116**: 669, 1936.
12. McGlone, B., and Bazett, H. C.: The Temperature of the Air in Contact with the Skin, Am. J. Physiol. **82**: 452, 1927.
13. Burton, A. C.: The Application of the Theory of Heat Flow to the Study of Energy Metabolism, J. Nutrition **7**: 497, 1934.

THE USE OF PENICILLIN IN ACUTE SORE THROAT

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Medical Corps, Army of the United States

The treatment of acute follicular and exudative tonsillitis and pharyngitis continues to be a problem despite the advent of the sulfonamide drugs. On the basis of bacteriologic studies it is considered that the usual causative agent is a hemolytic streptococcus.[1] Recently, after a study of the bacteriology in 116 cases with exudate in the pharynx or on the tonsils, Dingle and his associates concluded that approximately 25 per cent of the cases were definitely caused by beta-hemolytic streptococci. In 75 per cent of the cases they put the cause down as unknown.[2] In any event it is generally accepted that a hemolytic streptococcus is implicated in a large number of cases of acute sore throat. Since the complications of acute sore throat are frequent and often serious, the availability of a therapeutic measure that would obtain rapid and complete cure, and without relapses, is greatly to be desired.

Penicillin has been shown to be of greater efficacy against the hemolytic streptococcus than the sulfonamides.[3] The toxic effects of penicillin are almost nil. In penicillin we would seem to have an excellent remedy for acute pharyngotonsillitis. Owing to the exigencies of wartime, until recently all available penicillin was used only for more serious illnesses than acute sore throats. Now, however, there is a sufficiency of the drug for all purposes.

Plummer [4] treated 28 cases of acute sore throat with penicillin, using 15,000 units every four hours, day and night. Using very careful laboratory follow-up, he and his associates reported that cases treated for less than six days with this dosage of penicillin showed comparatively poor results in that relapses, clinically and bacteriologically, were relatively frequent. Patients treated for six days with the same plan of dosage showed excellent results. A search of the available literature at present has failed to reveal any other clinical reports on the use of penicillin in acute sore throat. Since there is a paucity of reports on this important subject, it is felt that a paper presenting a further 28 cases of acute sore throat treated with penicillin is timely. The consideration of Plummer's findings led to the possibility that, since the six day course of treatment was more successful than the four day period, perhaps a short but more intensive course of therapy with penicillin might give better results. This paper presents a series of cases so treated.

This article is presented almost completely from a clinical point of view, since these patients were cared for in a station dispensary, and the facilities for bacteriologic studies were scanty. It was possible to obtain a preliminary culture from 20 patients before instituting therapy. No attempt was made to carry out controls with sulfonamide and nonchemotherapeutic treatment. This paper is therefore presented as a simple clinical study. A great deal of more detailed investigation is necessary before the exact extent of the benefit of penicillin in acute sore throat will be known.

1. Dawson, M. H.: Acute Tonsillitis, in Cecil, R. L.: Textbook of Medicine, ed. 6, Philadelphia, W. B. Saunders Company, 1943.
2. Endemic Exudative Pharyngitis and Tonsillitis, Commission on Acute Respiratory Diseases, J. A. M. A. **125**: 1163 (Aug. 26) 1944.
3. Keefer, C. S., and others: Penicillin in the Treatment of Infections: A Report of 500 Cases, J. A. M. A. **122**: 1217 (Aug. 28) 1943.
4. Plummer, Norman; Duerschner, A. B.; Warren, H. D.; Rogliano, F. T., and Sloan, R. A.: Penicillin Therapy in Hemolytic Streptococcic Pharyngitis and Tonsillitis, J. A. M. A. **127**: 369 (Feb. 17) 1945.

METHODS

No patients were treated with penicillin who had been ill for more than forty-eight hours. Preliminary pharyngeal or tonsillar cultures were taken on blood agar plates from 20 cases. The reports obtained were only whether organisms were present and which was the predominate organism, if any. No typing of streptococci was done at the laboratory available.

Each patient treated with penicillin received only that drug and no other treatment. No gargles, irrigations, analgesics or antipyretics were used. Penicillin was administered in the amount of 20,000 units every three hours day and night by intramuscular injection into the buttocks.

BACTERIOLOGY

In 13 cases a beta-hemolytic streptococcus was cultured as the predominant organism. In 3 cases the beta-hemolytic streptococcus was cultured but was not predominant. In the latter 3 the predominant organisms were nonhemolytic staphylococci, nonpathogenic gram negative diplococci and alpha-hemolytic streptococci respectively. Of four cultures in which no beta-hemolytic streptococcus was reported, three grew an alpha-hemolytic streptococcus and the fourth Pseudomonas aeruginosa. For varying reasons 7 patients failed to have throat cultures performed. All of the 27 men were treated with penicillin.

Observations in Thirty-One Cases

Case	Culture: Hemolytic (beta) Streptococcus	Culture: Other Predominant Organisms	Penicillin, Total Dose	Temperature Normal, Days	Symptoms Disappeared, Days	Signs Disappeared, Days	Days in Hospital
1	Predominant	.....	140,000 units	1	Less than 2	Less than 4	7
2	Predominant	.....	100,000 units	Less than 1	Less than 1	Less than 2	5
3*	Predominant	.....	320,000 units	2	3	4	17
4*	Predominant	.....	380,000 units	6	Less than 3	Less than 4	13
5	Predominant	.....	100,000 units	Less than 1	3	Less than 5	9
6	Predominant	.....	120,000 units	Less than 1	Less than 2	Less than 3	6
7	Predominant	.....	300,000 units	Less than 1	1	2	5
8	Predominant	.....	360,000 units	Less than 1	Less than 2	3	7
9*	Predominant	.....	640,000 units	3	1	3	7
10	Predominant	.....	380,000 units	1	1	Less than 2	6
11*	Predominant	.....	600,000 units	3	2	4	7
12*	Predominant	.....	480,000 units	5	4	6	12
13	Predominant	.....	380,000 units	Less than 1	2	3	6
14*	Present	Nonhemolytic Staph. aureus	560,000 units	2	Less than 2	4	7
15*	Present	Nonpathogenic gram-negative diphtheriae	720,000 units	Less than 1	Less than 2	3	10
16	Present	Alpha hemolytic Str.	400,000 units	1	2	2	6
17	Absent	Alpha hemolytic Str.	200,000 units	2	Less than 4	5	8
18	Absent	Alpha hemolytic Str.	280,000 units	Less than 3	3	Less than 4	10
19	Absent	Pseudomonas aeruginosa	400,000 units	1	3	Less than 5	9
20	Absent	Alpha hemolytic Str.	420,000 units	1	Less than 2	Less than 4	7
21	.....	.....	220,000 units	Less than 1	Less than 4	5	7
22	.....	.....	100,000 units	1	2	Less than 3	6
23	.....	.....	340,000 units	Less than 1	Less than 2	3	9
24	.....	.....	320,000 units	Less than 1	Less than 2	2	5
25	.....	.....	280,000 units	Less than 1	Less than 2	3	5
26*	.....	.....	480,000 units	4	2	6	8
27*	.....	.....	560,000 units	Less than 1	1	4	6
28*	.....	Corynebacterium diphtheriae	920,000 units				
29*	Predominant	.....	0	6	6	6	12
30	Present	Gram-negative diplococcus	0	5	6	8	11
31	.....	.....	0	1	2	4	8

* Case 3. Mild recurrence after 4 days out of bed; rapid recovery after gargles. Case 4. After first day had occasional low grade fever until sixth day. Case 9. Highest temperature 106 F.; chills. Case 11. Highest temperature over 105 F.; chest x-ray negative. Case 12. Highest temperature 104 F.; chest x-ray negative; normal white blood cell count and differential; heterophile agglutination negative; see comment for further discussion of this patient. Case 14. Highest temperature 105 F. Case 15. Penicillin inadvertently administered in greater than desired amount. Case 26. Temperature low grade after first day, until fourth day. Case 27. Highest temperature 104 F. Case 28. See under results for further discussion of this patient. Case 29. Mild unilateral otitis media catarrhalis for several days.

The cases so treated occurred during the months of June-November inclusive, 1945. The dispensary is situated in the Hawaiian Islands, which has a subtropical climate, with an even temperature prevailing the year round.

MATERIAL

All of the patients reported were young adults with no complicating diseases. In each instance the onset of the sore throat for which they were hospitalized was acute, and they were all admitted to the ward within forty-eight hours of the beginning of their illness. In all but 2 patients the tonsils were present, and in all of these there was tonsillar exudate, edema and diffuse inflammation of the tonsils and pharyngeal wall. In the 2 men who had had previous tonsillectomies a diffuse follicular pharyngitis was found.

There were 3 cases during this period in which no therapy with penicillin was given but instead symptomatic treatment with saline throat irrigations, capsules containing acetylsalicylic acid, acetophenetidin and codeine and ice collars. One of these patients did not have a culture taken; and of the remaining 2 beta-hemolytic streptococci were grown from their throat cultures.

RESULTS

The accompanying table classifies each case according to the organism cultured, the amount of penicillin used, the time taken for the temperature to return to normal, the time elapsed before symptoms and exudate disappeared and the number of days spent in the hospital.

One may attempt a rough comparison of the amount of penicillin used in the varying patients according to bacteriologic findings. In the 13 cases in which the

beta-hemolytic streptococcus was predominant an average of 320,000 units was used, or two full days of therapy at 20,000 units every three hours. In the 3 cases in which a beta-hemolytic streptococcus was present but not predominant in the culture, the average was 580,000 units, or about three and one-half days of treatment. In the 4 cases not showing a beta-hemolytic streptococcus on culture, the average dosage was 325,000 units, or two full days of penicillin. In the 7 cases in which no culture was obtained from the throat the average amount of penicillin used was 325,000 units.

The mean time elapsing from the beginning of penicillin therapy to persistence of a normal temperature was under two days in each of the series. The average for complete disappearance of all symptoms of sore throat was two days in all the cases with a beta-hemolytic streptococcus and in those lacking a culture. In the other 4 cases the average time was three days.

The exudate disappeared and the pharynx and tonsils appeared normal in an average of under three days in patients with a beta-hemolytic streptococcus predominant. When the beta-hemolytic streptococcus was present but not predominant the average was three days. The 4 patients with no streptococcus averaged four days. The patients from whom no bacteria were obtained displayed normal throats in an average of under four days. It must be remembered that the periods of time noted in this and the preceding paragraphs are the upper limits. Disappearance of symptoms and of signs means complete absence. There had to be not the slightest pain on swallowing nor any remaining exudate or inflammation before a time element was established.

Without attempting to draw any mathematical parallel, it is of interest to present the results in the 3 cases in which specific therapy was not used. In 1 a beta-hemolytic streptococcus was predominant on the throat culture, and here it took six days for the temperature to return to normal, six days for the sore throat to disappear, and six days for the exudate to vanish. In the second case a beta-hemolytic streptococcus was present but not predominant and the results, as before, were five, six and eight days respectively. In the third case no culture was obtained and the results were one, two and four days respectively.

Patient 26 is of special interest and may be best presented at this point. He was admitted with an exudative tonsillitis. When seen in the ward a thick, adherent membrane was noted over the tonsils extending toward the pharynx. Cultures were immediately obtained on Loeffler's medium and on blood agar plates and the patient was placed on the usual penicillin routine and closely observed. He received 480,000 units, with apparently complete resolution of the disease process. Three days after therapy had been discontinued there was a low grade rise in temperature and a slight sore throat. A small amount of grayish, easily removable exudate was present on the left tonsil. He was given 440,000 units of penicillin. The first throat culture yielded a virulent strain of Corynebacterium diphtheriae as the predominant organism, and beta-hemolytic and alpha-hemolytic streptococci also were present. A culture obtained before the second course of penicillin was begun revealed a similar growth. Since treatment has been stopped, the throat cultures have been negative for Corynebacterium diphtheriae and for other pathogenic organisms. The patient has continued to be well since discharge from the hospital.

COMMENT

It has already been stated that, because of the lack of sufficient bacteriologic reports and follow-ups in these cases, no attempt is being made to present biostatistical conclusions. Only a clinical appraisal is possible. It is felt that the results in this series may be used as a contribution to the final evaluation of the use of penicillin in the treatment of acute sore throat.

In all the men treated with penicillin there were no complications such as otitis media or pneumonia. In only 2 patients do we find evidence of failure of penicillin. In 1 (case 3) there was a mild recurrence, and after a few days of further rest in bed and saline gargles, recovery was complete. The second patient (patient 12) continued to be ill despite 480,000 units of penicillin, and then, less than twenty-four hours after cessation of penicillin and the beginning of sulfadiazine, there was a sudden remarkable recovery. Sulfadiazine was given for three days, 1 Gm. every four hours after an initial dose of 4 Gm.

All the patients treated were based on this field. Any soldier becoming ill would of necessity have to report to this dispensary before hospitalization. After going back to full duty, not 1 of the patients in this series returned with a recurrence of the sore throat. Plummer and his associates [4] concluded that at least six days of penicillin treatment are necessary. They state that otherwise the rate of recurrence will be high. However, they use penicillin in a dosage of only 15,000 units every four hours. In this series 20,000 units every three hours was employed and, as seen in the results, far less than six days of therapy were necessary to achieve clinical success. McDermott [5] also mentions that pharyngitis and tonsillitis require at least five to seven days of penicillin before one can prevent relapse in an ordinary streptococcic sore throat and that it requires daily administration of 100,000 to 200,000 units. The results in this series are at variance with the latter statement except in the matter of daily dosage. In our series 160,000 units a day was administered. The total amount was varied according to the seriousness of each case, taking into account the initial height of the temperature, the appearance of the throat and the response after twenty-four hours. It was found that an average complete course would be about 360,000 units (two days plus two doses). It is felt that, considering the findings in this series, it would be rare to need more than three days of treatment with 20,000 units every three hours.

SUMMARY AND CONCLUSIONS

1. Twenty-eight cases of acute sore throat were treated with penicillin (including 1 case of acute pharyngotonsillar diphtheria).
2. The dose of penicillin employed was 20,000 units every three hours day and night.
3. The average total dose of penicillin in 27 cases of acute sore throat was 360,000 units over fifty-four hours. (This does not include the patient with diphtheria.)
4. There was one relapse, in which recovery occurred without further penicillin. One case did not respond until sulfadiazine replaced penicillin as the treatment.
5. No complications occurred, either during or after treatment.
6. A short but intensive course of penicillin would seem to be effective in the treatment of acute sore throat, and further investigations along these lines are warranted.

5. Penicillin, Conferences on Therapy, New York State J. Med. 45: 1875 (Sept. 1) 1945.

Special Article

DIPHTHERIA MORTALITY IN LARGE CITIES IN THE UNITED STATES IN 1945

Twenty-First Report

No review of the diphtheria deaths in the large cities has been prepared since that of 1942. The procedure followed in obtaining data for this report is described in the review of typhoid mortality for these same cities.[1] A communication was addressed to the health officer of each of the cities requesting the number of deaths from diphtheria both among residents and among nonresidents

The practice of charging all deaths, both among residents and among nonresidents, against the individual city has been continued with the inclusion of appropriate symbols similar to those employed in previous years. Such symbols indicate those cities in which either (1) all diphtheria deaths were stated to be in nonresidents or (2) one third or more of such deaths were stated to be in nonresidents. Attention is directed to tables 11 and 13, which together list forty-five cities which record no diphtheria deaths among residents in 1945. In addition to the thirty-one cities (table 12) with no diphtheria and typhoid deaths in 1945, five cities (Charlotte, El Paso, Flint, Hartford, Memphis) report no death among residents from either cause.

The fourteen New England cities (table 1) (population 2,579,152) have failed during the past five years to

TABLE 1.—*Death Rates of Fourteen Cities in New England States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Lynn	0.0	0.0	0.4	4.7	13.5	17.0	17.8	17.2	21.7	38.0	44.0	49.0
Worcester	0.0	0.0	0.7†	3.3†	8.6	15.5	14.1	21.3	32.2	16.5	50.3	47.8
Bridgeport	0.0	0.0	0.8	1.2	11.8	19.6	33.4	23.3	26.8	34.2	63.9	79.3
Waterbury	0.0	0.0	1.4	2.4	2.6	17.9	23.0	29.6	....	....	....	....
New Haven	0.0	0.1*	0.4*	0.7†	1.6	7.1	14.2	14.9	22.7	15.6	54.8	74.5
Somerville	0.0	0.2	0.4	9.3	5.7	19.7	20.2	21.4	21.5	40.5	57.8	37.4
Cambridge	0.0	0.4	0.3	1.2	3.2	8.9	12.9	23.8	25.3	46.7	71.9	58.0
Lowell	0.0	0.8	2.8	9.4	10.6	16.7	23.5	20.6	31.0	59.3	44.3	36.4
Fall River	0.0	0.9	2.4	3.6	12.0	25.5	23.6	24.0	34.4	50.1	43.8	46.9
Providence	0.4	0.9†	0.6†	5.1	9.5	15.8	29.3	26.8	30.7	41.2	53.5	55.3
Boston	0.5	0.4†	0.7†	3.2†	8.3	20.2	26.3	20.0	26.2	53.7	83.9	112.2
Hartford	0.6*	0.5†	1.9†	1.1†	5.3	11.9	13.8	25.3	28.1	38.8	47.8	120.9
Springfield	0.7	0.4	0.3*	2.1	10.3	15.4	24.9	19.1	31.3	29.6	51.3	68.2
New Bedford	0.9	0.5	0.4	5.0	10.9	16.5	17.0	20.9	22.6	25.1	53.6	20.0

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.

TABLE 2.—*Death Rates of Eighteen Cities in Middle Atlantic States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Syracuse	0.0	0.0	0.2†	0.4†	2.0	22.9	12.9	16.6	17.4	17.7	31.1	55.4
Yonkers	0.0	0.0	0.3	0.6	10.4	17.0	17.7	25.3	....	....	....	....
Elizabeth	0.0	0.0	0.5†	4.5	13.2	19.2	19.3	14.8	51.7	42.4	60.5	79.3
Rochester	0.0	0.1*	0.0	0.7	7.5	16.9	12.7	22.1	32.4	32.3	45.9	96.6
Newark	0.0	0.1	0.2	3.0	14.5	9.7	14.6	23.3	30.1	46.7	79.1	110.4
Paterson	0.0	0.1	0.9	6.3	9.1	18.5	13.5	16.1	25.5	52.9	111.8	145.4
Utica	0.0	0.2	0.0	1.2	13.4‡	....	....	....	....	....	....	....
Reading	0.0	0.2	2.5	3.6	7.3	21.1	16.9	35.7	29.2	70.1	72.0	94.1
Albany	0.0	0.3*	0.2*	3.0	7.5	12.8	10.4	20.0	31.6	26.9	....	....
Scranton	0.0	0.4†	0.7	1.7	11.7	12.3	22.1	23.4	....	....	77.8‖	48.6‖
Trenton	0.0	0.5	0.8	2.7	4.4	7.3	8.8	12.8	15.8	23.6	92.7‖	89.7‖
Camden	0.0	1.5†	2.7	8.1†	21.9	20.3	23.2	38.8	48.9	52.6	93.8	194.0
Philadelphia	0.1	0.1	0.5	1.3	11.8	16.7	22.7	24.6	34.1	50.0	100.6	119.4
New York	0.2†	0.1	0.6	2.2	10.7	14.0	21.8	28.0	40.0	58.0	85.8	134.4
Jersey City	0.3	0.5	2.4	6.0	11.5	18.4	21.0	23.2	32.6	57.9	85.4	108.6
Pittsburgh	0.4†	0.5	1.3	5.1	11.5	20.1	22.3	29.3	20.4	36.9	32.9	86.4
Buffalo	0.5	0.3	0.8†	4.9	9.1	24.0	27.3	22.0	18.4	24.8	53.5	60.9
Erie	0.9	0.3	0.0	4.0	5.8	16.8	15.1	17.7	27.1	42.3	23.1	....

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
‖ Diphtheria deaths from Chapin's Municipal Sanitation.
‡ Incomplete data.

reported in each of the three years 1943, 1944 and 1945. Comment was also sought on any special outbreak of diphtheria or change in age incidence; also any special program to secure the protection of children against this disease. In calculating death rates the 1940 census figures were used. Footnotes indicate corrections in rates for those cities for which the Bureau of the Census has prepared official estimates for years subsequent to 1940.

equal the low point of six deaths in 1940 (eleven in 1941, eleven in 1942, twelve in 1943, nine in 1944, eight in 1945). The death rate for the group as a whole has increased slightly from 0.23 in 1940 to 0.31 in 1945 (0.43 in 1941 and 1942, 0.47 in 1943, 0.35 in 1944) and these cities continue to trail the Middle Atlantic group (0.20), which holds first place not only for 1945 but for the quinquennium 1941-1945. Nine cities (Bridgeport, Cambridge, Fall River, Lowell, Lynn, New Haven, Somerville, Worcester, Waterbury) record no death (there were nine in 1944, eight in 1943, nine in 1942). Of eight deaths in this group of cities, two were among nonresidents (one in Hartford, one of four in Boston). It is stated that there has occurred no death from diphtheria in Lynn for nine years (a record equaled only by Elizabeth), none in Waterbury for

The preceding articles were published in THE JOURNAL Sept. 20, 1924, p. 918; April 25, 1925, p. 1269; April 3, 1926, p. 1005; April 30, 1927, p. 1396; May 19, 1928, p. 1621; May 25, 1929, p. 1759; June 7, 1930, p. 1838; May 23, 1931, p. 1768; May 7, 1932, p. 1644; May 20, 1933, p. 1595; May 26, 1934, p. 1758; June 15, 1935, p. 2182; June 13, 1936, p. 2060; June 26, 1937, p. 2200; Aug. 6, 1938, p. 524; May 20, 1939, p. 2043; May 11, 1940, p. 1875; Feb. 28, 1942, p. 714; Aug. 29, 1942, p. 1503, and Aug. 14, 1943, p. 1079.

1. Typhoid in the Large Cities of the United States in 1945, J. A. M. A. 131: 817 (July 6) 1946.

seven years, none in Bridgeport and Worcester for six years. New Haven reports no death among residents for seven years. Lynn reports no diphtheria or typhoid death occurring during the past nine years, Bridgeport and Worcester none for four years, Fall River none for three years.

The eighteen cities (population 13,129,185) in the Middle Atlantic states (table 2) continue to hold first nonresidents). The proportion among nonresidents has definitely increased during the past two years. For 1945 twelve cities appear in the select list (table 11) with no diphtheria death (Albany, Camden, Elizabeth, Newark, Paterson, Reading, Rochester, Scranton, Syracuse, Trenton, Utica, Yonkers). Elizabeth reports no death for nine years, Yonkers none for eight years, Syracuse none for six years. Rochester reports no

TABLE 3.—*Death Rates of Ten Cities in South Atlantic States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Richmond	0.0	0.3†	1.7†	3.5†	6.9	9.8	5.8	7.0	9.8	24.4	17.6	50.7
Norfolk	0.0	0.7†¶	2.4	4.6	4.1	4.3	4.1	6.7	17.0	....	....	....
Washington	0.3*¶	0.2†	2.8	3.7	7.1	10.5	11.9	6.9	11.2	23.5	50.9	77.9
Miami	0.6	0.5	2.2†	3.5	5.4#	....	....	....	....	....	....	....
Atlanta	0.7*	1.6†	4.6†	5.9†	7.0	13.3	10.1	12.5	14.2	11.1	10.5	8.8
Wilmington	1.8†	0.5†	1.6	6.2	10.9	11.6	15.2	18.0	27.8	50.9	84.9	83.8
Jacksonville	2.3	2.1	2.4	5.5	6.0#	....	....	....	....	....	....	....
Tampa	2.8	2.4†	3.1†	4.0	4.6	5.2	9.5#	....	....	....	....	....
Baltimore	2.9‖	1.2‖	1.0†	1.7	7.6	11.4	13.5	14.2	16.1	33.0	68.1	70.9
Charlotte	6.0*	2.4†	6.0†	4.1	....	....	....	....	....	....	....	....

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
# Incomplete data.
‖ 1943 special census gives rate of 2.7 for 1945 and 1.1 for 1941-1945 for Baltimore.
¶ 1944 special census gives rate of 0.5 for 1941-1945 for Norfolk and rate of 0.2 for 1945 for Washington.

TABLE 4.—*Death Rates of Nineteen Cities in East North Central States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Grand Rapids	0.0	0.0	0.2	0.7	2.0	19.6	13.5	20.0	26.6	17.2	32.4	99.2
Canton	0.0	0.0	0.7	1.7	2.9	17.5	15.1#	....	....	....	....	....
Youngstown	0.0	0.0	0.7	3.2	10.5	18.5	11.9	40.5	33.5	28.0	17.6	28.4#
Akron	0.0	0.2	1.8	2.7	4.9	10.4	18.9	27.8	21.2#	....	....	....
Evansville	0.0	0.2	1.8	3.5	3.7	13.9	14.9	16.1	21.2	13.8	18.1	69.7
Gary	0.0	0.2	2.8	1.4	....	....	....	....	....	....	....	....
Peoria	0.0	0.2	3.8	5.3	4.9	7.4	10.8	10.6	10.1#	14.0	14.6	68.9
Fort Wayne	0.0	0.3	1.9	4.0	5.1	13.1	6.3	....	....	....	....	....
South Bend	0.0	0.4	1.0	1.3	....	....	....	....	....	....	....	....
Chicago	0.1	0.8	2.2	4.5	11.7	17.5	31.2	37.9	27.0	33.9	69.7	117.3
Milwaukee	0.2	0.2	0.4	2.1	8.5	11.4	19.3	27.8	26.4	22.7	51.7	116.2
Toledo	0.4	0.4†	1.1	2.7	7.2	22.4	14.1	25.4	29.4	56.8	34.6	89.3
Cleveland	0.7†	0.5†	1.0	2.5	15.3	14.7	20.0	24.6	20.8	42.6	45.3	95.7
Flint	0.7*	0.8†	2.8	2.7	4.5	29.9	25.5	12.7	11.0	16.8	6.9	69.2
Cincinnati	0.9†	1.2	2.4†	3.1	5.2	10.6	13.2	13.9	17.0	17.3	37.3	103.7
Detroit	1.3	0.8	1.1	5.2	19.7	24.3	32.2	33.3	22.6	38.5	62.9	132.9
Dayton	2.4†	0.9†	4.3	3.6	4.6	9.4	9.3	22.1	13.3	17.2	27.4	82.9
Indianapolis	2.8	2.0†	3.6	2.9	6.6	11.7	21.4	13.5	13.2	15.9	30.4‖	97.3‖
Columbus	3.9†	1.1†	1.9	3.2	4.6	8.5	7.6	12.1	10.5	11.6	28.5	56.9

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
‖ Diphtheria deaths from Chapin's Municipal Sanitation.
Incomplete data.

TABLE 5.—*Death Rates of Six Cities in East South Central States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Louisville	0.9†	0.5†	2.2	6.2	4.6	10.4	9.5	9.0	....	....	39.0‖	48.6‖
Memphis	1.4*	1.4†	2.2†	6.0	5.8	9.5	11.2	11.9	13.4	6.9	10.0	28.5
Birmingham	1.5†	1.0†	3.1†	4.4	5.4	5.3	7.2	8.3	6.2	13.4	16.5	26.3
Chattanooga	3.1	2.2	4.0	6.8	5.9	8.7	8.9	....	....	....	....	....
Nashville	3.6†	1.1†	4.5†	8.0	11.8	8.0	8.9	7.3	10.3	13.9	30.1	28.4
Knoxville	17.3†	5.5†	8.2†	10.9	6.3	11.2	....	....	....	....	....	....

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
‖ Diphtheria deaths from Chapin's Municipal Sanitation.
Incomplete data.

place. The group rate of 0.20 is higher than that of 1944 (0.11), when these cities set an all time low for any group. In 1944 there were but fifteen deaths, five of these among nonresidents. Thirteen cities recorded no deaths in 1944; Camden three and Scranton two among nonresidents; New York six, Philadelphia three and Buffalo one among residents. In 1945 there were twenty-six deaths in this group of cities, eight among nonresidents (in 1943 there were forty-one deaths, three among nonresidents; twenty-three in 1942, two among death among residents for eleven years, an impressive accomplishment. It is stated that no death from either typhoid or diphtheria has occurred in Yonkers during the last seven years, none in Albany and Paterson for four years, none in Reading and Utica for three years, none in Trenton for two years, none in Elizabeth, Rochester, Scranton and Syracuse during 1945. Utica reports but a single death from diphtheria for twelve years. New York records fifteen deaths for 1945, six among nonresidents (six in 1944, all among residents,

sixteen in 1943, fifteen among residents; seven in 1942, all among residents). The health commissioner reports that the percentage of cases among persons over 15 years of age, excluding military personnel, increased from 20.5 per cent for the five years 1941-1945 to 29.1 per cent for 1945. Philadelphia records three deaths, all among residents (three in 1944, two in 1943, three in 1942, all among residents). Pittsburgh was on the honor roll in 1944 with no death. In 1945 there were three deaths, two among nonresidents (in 1943 there twenty-seven in 1941 (rate 0.99) to seventeen in 1942 (rate 0.62) and eighteen in 1943 (rate 0.66) but has increased to thirty in 1944 (rate 1.10) and thirty-nine in 1945 (rate 1.43). During the five years 1941-1945 there have occurred one hundred and thirty-one deaths, of which forty-two have been among nonresidents. Norfolk and Richmond are on the 1945 honor roll. Charlotte, Richmond, Washington and Wilmington were without deaths in 1944, Miami, Norfolk, Richmond and Wilmington in 1943. For 1945 it is stated that in

TABLE 6.—*Death Rates of Nine Cities in West North Central States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Des Moines	0.0	0.2	1.5	4.3	5.2	15.1	16.6	15.1	23.8‡	....	....	....
Wichita	0.0	0.3†	1.2	5.7	4.2	....	....	....	....	....	....	....
St. Paul	0.0	0.4†	0.2	1.0	5.2	17.5	20.7	31.4	31.1	27.9	43.3	75.4
Omaha	0.0	0.4	1.4	5.1	6.4	22.9	35.8	15.8	24.5	20.5	28.2	82.9
St. Louis	0.1*	0.4†	2.4†	4.8	10.3	16.1	24.4	23.7	19.4	43.3	62.9	67.7
Minneapolis	0.6	0.4	0.6	1.7	11.9	13.4	19.9	28.3	24.4	44.6	34.0	55.0
Duluth	1.0	0.4	0.2	0.4	2.0	6.0	10.2	8.8	38.2	29.1	7.6	49.5
Kansas City, Mo	2.3†	0.8†	0.9	3.3	4.7	14.4	22.8	15.7‡	....	....	....	....
Kansas City, Kan	3.3	1.6	1.6	3.5	4.6	9.8	23.1	12.4‡	....	....	....	....

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
‡ Incomplete data.

TABLE 7.—*Death Rates of Eight Cities in West South Central States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Tulsa	0.7	1.5	1.7	6.8	12.5	8.3‡	....	....	....	....	....	....
El Paso	1.0*	5.6†	4.7	8.3	7.3	20.0	17.6	29.2	....	....	....	....
San Antonio	1.6†	2.6†	4.1	5.7	10.3	7.7	8.7	6.7	7.6	17.1	20.6	4.4
Dallas	1.7†	1.7†	4.6	10.0	9.8	8.3	7.4	6.9	8.1	16.9	16.0	21.8
Houston	2.1	1.5	2.6	5.6	8.2	6.4	6.1	7.8	10.5	4.2‡	2.4	1.8
Oklahoma City	2.4	0.8	2.0	5.7	10.9	....	....	....	....	....	....	....
New Orleans	3.4¶	2.5¶	4.3†	5.5	8.5	6.5	11.6	19.6	10.2	11.5	17.1	51.3
Fort Worth	5.6	2.8	3.9	7.2	10.8	1.7‡	2.0‡	2.6	2.8	5.4	....	....

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
‡ Incomplete data.
¶ 1945 special census gives rate of 3.3 for 1945 and 2.4 for 1941-1945 for New Orleans

TABLE 8.—*Death Rates of Twelve Cities in Mountain and Pacific States from Diphtheria (Including Croup) per Hundred Thousand of Population*

	1945	1941-1945	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904	1895-1899	1890-1894
Salt Lake City	0.0	0.5	1.0	1.3	10.1	12.5	14.5	15.1	34.2	46.0	14.8	56.7‡
Oakland	0.3	1.1¶	2.5	2.0	7.4	18.8	8.1	10.3	16.1	29.1	....	....
Long Beach	0.6¶	0.4¶	0.4	0.8	2.6	10.4‡	....	....	....	....	....	....
Los Angeles	0.7¶	1.2	2.5	5.2	7.0	14.4	7.1	7.5	15.3	25.4	35.8	46.0
Denver	1.5†	1.9	3.3	3.9	8.9	23.2	6.7	10.2	20.8	29.6	27.3	130.2
San Francisco	1.9†**	1.1**	1.0	1.2	4.6	23.0	17.0	9.2	14.4	44.2	21.6	54.8
Tacoma	2.7†¶	2.0†¶	0.4*	3.9	9.3	12.4	7.7‡	....	....	....	....	....
San Diego	3.4†¶	2.6¶	2.3	2.9	6.6	12.2	10.5	8.0	5.8	2.4	....	....
Seattle	3.5	2.1†	0.4	0.4	1.4	6.6	5.5	5.2	12.5	13.4‡	27.2‖	....
Portland	4.2†¶	2.2†¶	0.3	1.3	6.4	11.3	6.0	12.3	12.2	20.2	....	....
Spokane	6.5†	2.0†	0.5	0.7	7.5	11.3	4.2	7.6	25.8	....	59.5‖	18.1
Sacramento	7.0†	6.0†	3.1	4.1	....	....	....	....	....	....	....	....

† One third or more of the reported diphtheria deaths were stated to be in nonresidents.
‖ Diphtheria deaths from Chapin's Municipal Sanitation.
‡ Incomplete data.
¶ 1944 special census gives rate of 0.5 for 1945 and 0.3 for 1941-1945 for Long Beach; rate of 0.6 for 1945 for Los Angeles; rate of 0.9 for 1941-1945 for Oakland; rate of 3.6 for 1945 and 2.0 for 1941-1945 for Portland; rate of 1.7 for 1945 and 1.8 for 1941-1945 for San Diego; rate of 2.3 for 1945 and 1.8 for 1941-1945 for Tacoma.
** 1945 special census gives rate of 1.4 for 1945 and 1.0 for 1941-1945 for San Francisco.

were nine deaths, eight among residents; in 1942 five deaths, four among residents). Buffalo reports three deaths among residents (one in 1944, three in 1943, two in 1942, none in 1941). Erie, with no death for the preceding three years and Jersey City with none in 1944, each record one diphtheria death in 1945.

In 1940 Charlotte was added to the nine cities previously included in the South Atlantic states (table 3) (population 2,727,985). The figures for this city have been omitted in the tables for group comparison. The number of deaths in the original cities declined from three cities (Atlanta, Charlotte, Washington) all deaths were among nonresidents. Richmond reports no death among residents for four years, Charlotte none for three years, Washington none for two years. The health officer of Charlotte states that the six deaths in 1945, all among nonresidents, were due primarily to the liberal policy of hospitalizing cases from the surrounding territory. Baltimore reports the most significant increase in diphtheria deaths, and this fact accounts largely for the higher group rate (twenty-five deaths in 1945, twenty among residents; thirteen deaths in 1944,

all among residents; seven deaths in 1943, three among residents; two deaths in 1942, both among residents). No city in this group is found in the list of those cities with no diphtheria and typhoid death in 1945 (table 12), although in Charlotte all such deaths were among nonresidents.

TABLE 9.—*Five Cities with Highest Diphtheria Rate for 1945*

Knoxville	17.3†
Sacramento	7.0†
Spokane	6.5†
Charlotte	6.0*
Fort Worth	5.6

* All diphtheria deaths were stated to be in nonresidents.
† One third or more of the reported diphtheria deaths were stated to be in nonresidents.

TABLE 10.—*Twenty-Eight* Cities with No Diphtheria Deaths in 1944 and 1945*

Albany 4	Grand Rapids 8	Salt Lake City 3
Bridgeport 6	Lowell 3	Somerville
Cambridge	Lynn 9	Syracuse 6
Canton 7	Newark	Trenton
Des Moines	Paterson 4	Utica 4
Elizabeth 9	Peoria 4	Waterbury 7
Evansville 4	Reading 3	Wichita 3
Fall River 3	Richmond 3	Worcester 6
Gary 4	Rochester	Yonkers 8
		Youngstown 8

3 No diphtheria deaths in three years.
4 No diphtheria deaths in four years.
6 No diphtheria deaths in six years.
7 No diphtheria deaths in seven years.
8 No diphtheria deaths in eight years.
9 No diphtheria deaths in nine years.
* Twenty-seven without Gary.

In obtaining data for the cities of the East North Central group (table 4), Gary (no death during the past four years) has been included since 1940. The figures for this city have been omitted in the tables for group comparison. The cities of this group (population 9,386,378) report an increase of thirteen deaths over 1944 (sixty-five in 1945, forty-four among residents; fifty-two in 1944, thirty-five among residents; ninety-seven in 1943, eighty-two among residents; sixty-nine in 1942, sixty-five among residents). The rate increased from 0.73 in 1942 to 1.03 in 1943, decreased to 0.55 in 1944 and again increased to 0.69 in 1945. Nine (including Gary) of the East North Central cities (Akron, Canton, Evansville, Fort Wayne, Gary, Grand Rapids, Peoria, South Bend, Youngstown) report no death from diphtheria in 1942 (there were seven such cities in 1944, ten in 1943 and 1942). It is stated that there has occurred no death from diphtheria in Grand Rapids and Youngstown for eight years, none in Canton for seven years. Flint reports no death among residents for three years. Canton and Grand Rapids report no diphtheria or typhoid death during the past six years, Evansville, Gary and Youngstown for four years, Peoria for two years, and Akron, Fort Wayne and South Bend none in 1945. For eight years Fort Wayne has reported no typhoid death and but two for diphtheria (one each in 1943 and 1944). For eight years South Bend has reported but one typhoid death (one among nonresidents in 1944) and but two for diphtheria (in 1944). Chicago reports a most striking reduction in diphtheria deaths (three in 1945, all among residents; five in 1944, four among residents; fifty-three in 1943, all among residents; forty-three in 1942, all among residents; thirty-four in 1941, all among residents). Detroit records an increase in diphtheria deaths (twenty-one in 1945, sixteen among residents; seventeen in 1944, eleven among residents; eleven in 1942, ten among residents; seven in 1941, five among residents). It is interesting to note that, of the sixteen deaths among residents occurring in 1945, five were among adults and two of these persons were over 50 years of age, whereas of the eleven deaths among residents in 1944 there were none among persons over 16 years of age. The health commissioner states that there has been a definite trend toward a higher incidence among older children and adults for cases as well. Cincinnati reports four deaths in 1945, two among residents (seven in 1944, five among residents; nine in 1943, seven among residents; three in 1942, all among residents). Cleveland records six deaths in 1945, two among residents (four in 1944, three among residents; seven in 1943, five among residents; two in 1942, one among residents). There has occurred a definite increase in deaths in Columbus (twelve in 1945, seven among residents; two in 1944, all among nonresidents; two in 1943 and one in 1942, all among residents). Also Indianapolis reports eleven deaths in 1945, nine among residents (seven in 1944, five among residents; eight in 1943, three among residents; five in 1942, four among residents).

The cities in the East South Central states (table 5) (population 1,286,747) report a decided increase in diphtheria deaths, especially among nonresidents hospitalized from surrounding suburban and rural areas. In 1945 in this group of cities there were forty-one deaths, twenty-five among nonresidents (in 1944 there occurred twenty-two deaths, eight among nonresidents; in 1943 eight deaths, six among nonresidents; in 1942 twelve deaths, ten among nonresidents). The group rate decreased from 0.93 in 1942 to 0.62 in 1943 and then increased to 1.71 in 1944 and 3.18 in 1945. This is the highest of all group rates for 1945, the cities of the West South Central area following next (rate 2.48) and the cities of the Mountain and Pacific area next (rate 1.74).

TABLE 11.—*Thirty-Seven Cities with No Diphtheria Deaths in 1945*

Akron	Lowell	Scranton
Albany	Lynn	Somerville
Bridgeport	Newark	South Bend
Cambridge	New Haven	St. Paul
Camden	Norfolk	Syracuse
Canton	Omaha	Trenton
Des Moines	Paterson	Utica
Elizabeth	Peoria	Waterbury
Evansville	Reading	Wichita
Fall River	Richmond	Worcester
Fort Wayne	Rochester	Yonkers
Gary	Salt Lake City	Youngstown
Grand Rapids		

Thirty-six without Gary.

TABLE 12.—*Thirty-One* Cities with No Diphtheria or Typhoid Deaths in 1945*

Akron	Grand Rapids 6	Somerville 2
Albany 4	Lowell 2	South Bend
Bridgeport 4	Lynn 9	Syracuse
Cambridge 2	New Haven	Trenton 2
Canton 6	Paterson 4	Utica 3
Des Moines 2	Peoria 2	Waterbury 2
Elizabeth	Reading 3	Wichita 3
Evansville 4	Rochester	Worcester 4
Fall River 3	Salt Lake City 3	Yonkers 7
Fort Wayne	Scranton	Youngstown 4
Gary 4		

2 No diphtheria or typhoid deaths in two years.
3 No diphtheria or typhoid deaths in three years.
4 No diphtheria or typhoid deaths in four years.
6 No diphtheria or typhoid deaths in six years.
7 No diphtheria or typhoid deaths in seven years.
9 No diphtheria or typhoid deaths in nine years.
* Thirty without Gary.

While there is no city without a death, Memphis reports all four deaths occurring among nonresidents. Four other cities (Birmingham, Knoxville, Louisville, Nashville) record one third or more deaths among nonresidents (three of four in Birmingham, eleven of twenty in Knoxville, two of three in Louisville, five of six in Nashville). Louisville was on the honor roll with no death in 1944. It is stated that in 1943 all diphtheria deaths were among nonresidents in Knoxville, Louisville, Memphis and Nashville. In 1943 there occurred only two deaths among residents in this group of cities (rate for residents 0.16). In 1945 the rate among residents was 1.32 (sixteen deaths). The health director of Knoxville reports no unusual change in the age incidence of diphtheria in that city during 1945. The mean age of patients was 4 years, the youngest being 8 months old and the oldest 25 years. The eleven nonresident diphtheria deaths came from several surrounding counties and one other state. These patients did not come from camps or construction jobs. It is stated that 75 per cent of the preschool children of Knoxville have received their protective treatments.

TABLE 13.—*Eight* Cities in Which All Diphtheria Deaths in 1945 Were Stated to Be in Nonresidents*

Atlanta	Flint 3	St. Louis
Charlotte 3	Hartford 2	Washington
El Paso	Memphis	

2 All deaths among nonresidents for two years.
3 All deaths among nonresidents for three years.
* Seven without Charlotte.

TABLE 14.—*Number of Cities with Various Diphtheria Death Rates*

	No. of Cities	40 and Over	20 and Over	10 and Over	5 and Over	Under 5	0.0
1890-1894	64	52	60	61	62	2	0
1895-1899	66	34	53	63	65	1	0
1900-1904	68	22	46	64	66	2	0
1905-1909	72	3	43	66	71	1	0
1910-1914	79	1	36	63	78	1	0
1915-1919	84	0	25	62	81	3	0
1920-1924	88	0	14	65	86	2	0
1925-1929	92	0	1	22	67	25	0
1930-1934	93	0	0	0	24	69	0
1935.....	93	0	0	2	17	76	19
1936.....	93	0	0	0	5	69	19
1937.....	93	0	0	0	3	70	20
1938.....	93	0	0	0	3	66	24
1939.....	93	0	0	0	2	59	32
1940*....	93	0	0	0	0	53	40
1941*....	93	0	0	0	1	53	39
1942*....	93	0	0	0	1	59	33
1945*....	93	0	0	1	2	54	36

* Charlotte, Gary and Sacramento omitted.

The nine cities in the West North Central states (table 6) (population 2,716,484) have maintained a fairly consistent rate during each of the past four years but higher than that for 1941 (0.66 in 1945, 0.74 in 1944, 0.55 in 1943 and 1942, 0.18 in 1941). In 1945 there occurred eighteen deaths, ten among residents (there were twenty in 1944, fourteen among residents; fifteen in 1943, eleven among residents; fifteen in 1942, twelve among residents; five in 1941, four among residents). Four cities (Des Moines, Omaha, St. Paul, Wichita) are on the 1945 honor roll (there were three in 1944, one in 1943). Following a period of seven years with no diphtheria death in Duluth, one death was recorded in 1943 and another in 1945, both among residents. Wichita reports no death from diphtheria and typhoid for three years, none from diphtheria among residents for four years. Des Moines records no death from either diphtheria or typhoid for two years. It is stated that the one death from diphtheria in St. Louis in 1945 occurred among nonresidents. Kansas City, Kan., reports four diphtheria deaths in 1945, three among residents (there were three deaths in 1944, two among residents; one in 1943 and two in 1942, all among residents). Kansas City, Mo., records nine deaths in 1945, six among nonresidents (there were five in 1944, three among nonresidents; one among nonresidents in 1943). Minneapolis, with no death in 1942, reports four in 1943, three in 1944 and three in 1945, all among residents.

The eight cities of the West South Central states (table 7) (population 2,048,692) report fifty-one deaths, thirty-three among residents, in 1945 (there were fifty-two deaths in 1944, twenty-eight among residents; forty-four in 1943, thirty-four among residents; thirty-nine in 1942, twenty-six among residents). The group death rate increased from 1.90 in 1942 to 2.14 in 1943 and 2.54 in 1944 and then decreased slightly to 2.48 in 1945. No city appears on the honor roll. It is stated that the one death in El Paso was among nonresidents. This city also reports no death from typhoid in 1945. In 1944 Tulsa was on the honor roll and Dallas reported three deaths, all among nonresidents. In three cities (Dallas, New Orleans, San Antonio) it is stated that one third or more of the deaths occurred among nonresidents. Four cities (Fort Worth, Houston, New Orleans, Oklahoma City) report rates in excess of 2.0.

TABLE 15.—*Total Diphtheria Death Rates for Eighty-Eight Cities, 1923-1945**

	Population	Diphtheria Deaths	Diphtheria Death Rate per 100,000 of Population
1923.....	31,060,848	4,078†	13.13
1924.....	31,722,841	3,439	10.84
1925.....	32,384,834	3,133	9.67
1926.....	33,046,827	3,106	9.40
1927.....	33,708,820	3,493	10.36
1928.....	34,370,813	3,176	9.24
1929.....	35,032,806	2,738	7.82
1930.....	35,719,180	1,827	5.22
1931.....	35,821,890	1,366	3.81
1932.....	35,916,317	1,191	3.32
1933.....	36,032,205	861	2.38
1934.....	36,166,434	821	2.27
1935.....	36,348,921	771	2.12
1936.....	36,549,325	551	1.51
1937.....	36,751,422	571	1.55
1938.....	36,956,409	467	1.26
1939.....	37,160,779	326	0.88
1940.....	37,309,215	225	0.60
1941.....	37,309,215††	209	0.56
1942.....	37,309,215††	256	0.69
1943.....	37,309,215††	288	0.77
1944.....	37,309,215††	252	0.68
1945.....	37,309,215††	311	0.83
	Rates for Ninety-Three Cities		
1935.....	37,025,179	789	2.13
1936.....	37,241,414	567	1.52
1937.....	37,459,339	583	1.55
1938.....	37,680,155	477	1.26
1939.....	37,900,854	330	0.87
1940.....	38,060,662	229	0.60
1941.....	38,060,662††	213	0.56
1942.....	38,060,662††	259	0.68
1943.....	38,060,662††	293	0.77
1944.....	38,060,662††	263	0.69
1945.....	38,060,662††	321	0.84

* The five following cities are omitted from this summary because data for the full period are not available: Jacksonville, Miami, Oklahoma City, South Bend and Utica.
† Data for Fort Worth lacking.
†† 1940 census figures used.

Dallas reports five deaths, two among residents; Fort Worth ten deaths, eight among residents; Houston eight, all among residents; New Orleans seventeen, eight among residents; Oklahoma City five, all among residents; San Antonio four, one among residents; Tulsa one among residents. In El Paso evidence of protection against diphtheria is now required for admission to school. It is stated that in Houston steps are being taken to make protection against diphtheria com-

pulsory for school children. Fort Worth will require evidence of protection beginning with the new school year in the fall of 1946.

In 1940 Sacramento was added to the eleven cities included in the Mountain and Pacific group (table 8). The figures for this city have been omitted in the tables for group comparison. The original cities (population 4,186,039) report the same number of deaths (seventy-three) as in 1942 (rate 1.74). This is larger than the number of deaths (thirty-nine) in 1941 (rate 0.93), (fifty-eight) in 1943 (rate 1.38) and (sixty-three) in 1944 (rate 1.50). Of the seventy-three deaths in 1945, twenty-six are among nonresidents (nineteen in 1942). Salt Lake City, with no death in three years, is the only city on the honor roll. Also there has been no death from typhoid in Salt Lake City for four years. In addition to this city, Long Beach was on the honor roll in 1944 and San Diego in 1943. It is stated that for 1945 in seven cities (Denver, Portland, Sacramento, San Diego, San Francisco, Spokane, Tacoma) one third or more of deaths were among nonresidents. Denver reports five deaths, three among nonresidents; Portland thirteen, eight among nonresidents; Sacramento seven, three among nonresidents; San Diego seven, three among nonresidents; San Francisco twelve, four among nonresidents; Spokane eight, three among nonresidents; Tacoma three, one among nonresidents. Los Angeles records ten deaths, all among residents; Seattle thirteen, nine among residents.

TABLE 16.—*Total Diphtheria Death Rates per Hundred Thousand of Population for Ninety-Three Cities According to Geographic Divisions*

	Population *	Diphtheria Deaths		Diphtheria Death Rates			
		1945	1944	1945	1941-1945	1935-1939	1930-1934
New England.....	2,579,152	8	9	0.31	0.39	0.85	3.38
Middle Atlantic.....	13,129,185	26	15	0.20	0.19	0.65	2.50
South Atlantic.....	2,727,985	39	39	1.43	0.95	2.18	3.54
East North Central	9,586,378	65	52	0.69	0.73	1.82	3.66
East South Central	1,286,747	41	22	3.18	1.50	3.37	6.36
West North Central	2,716,484	18	20	0.66	0.54	1.33	3.22
West South Central	2,048,092	51	52	2.48	2.14	3.85	6.55
Mountain & Pacific	4,186,039	73	63	1.74	1.46	1.71	2.09

* 1940 census figures used.

Of the entire ninety-three cities there was one (Knoxville) with a rate in excess of 10.1 and two (Spokane, Fort Worth), exclusive of Sacramento and Charlotte, with rates in excess of 5.0 (table 14). The number of cities with no deaths from diphtheria has increased from thirty-three in 1942 to thirty-six in 1945. However, the largest number (forty) of cities was found in this group in 1940 (thirty-nine in 1941). The number of cities with rates below 5.0 is fifty-four. For the eighty-eight cities (table 15) for which data are available since 1923 there occurred three hundred and eleven deaths from diphtheria in 1945 (more than for any single year since 1939). The rate, however, for this group of cities is for the seventh consecutive year less than 1.0. The rate for the ninety-three cities (0.84) is approximately the same as that for the eighty-eight cities (0.83). The actual number of deaths has increased by one hundred and eight over the low of 1941. War travel may have been an influence in increasing the incidence of diphtheria, especially on the Pacific coast. The liberal policy of accepting cases from surrounding suburban and rural areas has been an influence in the South, where there is definite evidence of delay in diagnosis, care and treatment before hospitalization is requested. The increase in deaths is very spotty, the tables speaking for themselves. There seems to be a slight tendency for diphtheria to become relatively more prevalent among the higher age groups. Infants should be protected before their first birthday, and booster protective treatments should be given at time of school admission and later in life when conditions indicate that it is desirable.

Clinical Notes, Suggestions and New Instruments

DIAPHRAGMATIC FLUTTER, WITH SYMPTOMS SUGGESTING ANGINA PECTORIS

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In September 1944 an elderly man was treated for recurrent attacks of diaphragmatic flutter at the Oakland ASF Regional Station Hospital, Oakland, Calif. It was ascertained that the patient had previously been in many hospitals in the United States with the same condition, registering under various names and giving different stories as to his past history and occupations. The case has been carefully reviewed in previous issues of THE JOURNAL[1] and no new features are added in this report. This note is published to indicate the sustained course of this rare condition and for the information of other physicians and institutions to which the patient may apply.

At 1 a. m. Sept. 1, 1944 an elderly man was brought by ambulance to this hospital. Information available at that time was that he had collapsed on one of the Oakland streets a few moments after alighting from a bus. He was brought to a civilian hospital, where he stated that he was a recently discharged army officer. Because of this statement, communication with this hospital was made and he was quickly transferred here. When seen by the officer of the day, he complained of severe excruciating pain in the lower part of his left chest, associated with extreme dyspnea, his statment being "It seems as if my heart were only half working; can't get my breath."

General physical examination showed that the patient was thin and moderately emaciated. Respiratory movements were shallow and restricted, owing, he said, to aggravation of his pain on inspiration. Two healed depressed scars were readily seen on each side of his neck. These, he stated, represented stab wounds inflicted by a Jap during the recent Tarawa invasion. A tattooed wreath of flowers was seen on his left arm 1½ inches above the wrist, and on the right arm a tattooed American eagle was found. The pulse at the wrist was 60. The heart rate at the apex was apparently extremely rapid and was variously estimated at 280 to 300 beats per minute. No abnormalities were found on clinical examination of the chest or abdomen. The peripheral tendon reflexes were normal. The pupils reacted normally. Some atrophy of the left half of the tongue was noted. Because of the apparent discrepancy between the pulse rate at the wrist and at the heart apex, a tentative diagnosis of auricular fibrillation was made; and because of his obvious pain and dyspnea, morphine was considered necessary and he was placed in an oxygen tent. A bedside electrocardiogram was taken and showed an essentially normal tracing. A portable roentgenogram of the chest showed only elevation of the left half of the diaphragm, with displacement of the heart and aorta to the right.

From the Medical Branch, Oakland ASF Regional Station Hospital, Oakland, Calif.

1. Porter, W. B.: Diaphragmatic Flutter with Symptoms of Angina Pectoris, J. A. M. A. **106**: 992-994 (March 21) 1936. Whitehead, R. W.; Burnett, C. T., and Lagen, J. B.: Diaphragmatic Flutter with Symptoms Suggesting Angina Pectoris, ibid. **112**: 1237-1241 (April 1) 1939.

The obvious incongruity of the findings gave rise to some informal discussion. Lieut. Sam Zlotnick, M C, hearing this, was immediately impressed with the resemblance of the clinical picture to that presented by a patient whom he had seen in 1942 in a civilian hospital in Ohio and, remembering the scars on the man's face, he became convinced of his identity. After seeing the patient, Lieutenant Zlotnick recalled the reports of hospitalizations on this person, and the exact determination of the patient's identity developed from a perusal of these and other records.

His course in the hospital was characterized by recurrences of chest pain and dyspnea. Each episode developed spontaneously and apparently terminated in the same way. During the recurrences a fluoroscopic examination of the chest showed a flutter of the right portion of the diaphragm. Little or no motion of the left side could be detected.

Routine blood counts showed 3,580,000 erythrocytes and 7,700 leukocytes per cubic millimeter. The hemoglobin was 73 per cent. The differential count showed 49 per cent neutrophils, 48 per cent lymphocytes, 2 per cent monocytes and 1 per cent eosinophils. The sedimentation rate was 31 mm. in one hour. A blood Kahn reaction was reported "doubtful" on two occasions, but the blood Wassermann reaction was negative.

There are several points of interest in regard to this man's identity and unreliable accounts of his past history and occupations. He can be readily identified by the scars and tattoo marks. He has been registered under a number of different names and has claimed to have been a deep sea diver, a miner, a trapper, a Texas deputy sheriff and a retired Regular Army officer with extensive tropical service, terminating in this last war, where he states he was wounded in the neck in combat with the Japanese.

Besides the hospitalizations mentioned in the previous descriptions of this case we have ascertained that the man has been hospitalized in Weimar Sanitarium, Colfax, Calif., the Veterans Administration Facility, Livermore, Calif., the Dibble General Hospital, Menlo Park, Calif., and Highland-Alameda County Hospital.

It seems pertinent to publish additional information in regard to the further interesting course of this man.

Council on Physical Medicine

The Council on Physical Medicine has authorized publication of the following report.

HOWARD A. CARTER, Secretary.

LUNGVENTILATOR ACCEPTABLE

Manufacturer: Mechanical Resuscitator, Inc., 400 Madison Avenue, New York 17.

The Lungventilator is a breathing machine of the positive and negative pressure type designed for administration of artificial respiration. It is manually operated.

Physicians cooperating with the firm in the development of the Lungventilator submitted reports on asphyxiated persons who were successfully resuscitated. The firm submitted evidence to substantiate the claims for the device. The summary of the report is as follows:

The Lungventilator:

1. Produces a pulmonary ventilation sufficient to resuscitate a patient in artificially produced apnea (Waters' test). This was accomplished on 1 subject.

2. Produced successfully resuscitation in 1 case of asphyxia due to respiratory cessation, which might have otherwise been a fatality.

3. Can be used to produce satisfactory pulmonary ventilation in thoracic surgical procedures with continuous intravenous sodium pentothal anesthesia. This was accomplished on 1 patient.

The Lungventilator consists of two adjacent cylinders each fitted with pistons operated by a common handle concurrently in the same direction. One cylinder creates the positive pressure which forces the air or gas into the air passages while the other cylinder draws the gas from the lungs. By setting the dial on the top of the positive cylinder, the length of the piston stroke is regulated by a stop to provide volumes of air proportioned to the age and size of the patient. The air movements are controlled both into and from the insufflation or positive cylinders and the suction or negative cylinder by means of inlet and discharge valves. These valves close by spherical balls seating in annular conical rings.

In the space between the discharge valve from the positive pressure cylinder and the hose leading to the face mask is a relief valve designed to prevent any positive pressure in excess of 20 mm. of mercury being applied to the patient's lungs. A similar relief valve placed between the hose leading from the face mask and the negative inlet valve to the negative or suction cylinder prevents any negative pressure in excess of minus 10 mm. of mercury being applied to the patient's lungs. Both pressures are within the established limits of safety.

The apparatus is constructed entirely of metal, consisting primarily of aluminum and steel. It is designed for simplicity of operation and may be used as soon as the face mask is attached to the patient.

After estimating the approximate age and size of the patient, the operator sets the dial at the top of the positive cylinder for the volume desired. One vinylite or rubber hose is then connected with the positive discharge nozzle and carried to the mask while the other hose is carried from the mask to the negative intake nozzle. If, through an erroneous estimation, too great a volume is set, it is of no consequence since the machine will not produce a pressure greater than the limit of safety either on the negative or on the positive pressure side. The mixing valve in the base may be adjusted for either air or oxygen or an oxygen-carbon dioxide mixture. The parts of the mixing valves are designed to overlap so that they cannot be closed simultaneously. The patient, therefore, will not be deprived of sufficient air, or of an air and gas mixture, by carelessness on the part of the operator.

Lungventilator.

The physician may insert the endotracheal tube with the assistance of a laryngoscope. He may, on the other hand, insert the airway which holds the tongue forward and opens the larynx. The face mask is then firmly adjusted and the machine is ready for operation. The operator then moves the handle with steady, rhythmic up-and-down strokes at the rate indicated on the dial for the volume required and as far as the volume stops allow. While this operation continues the patient may be placed on a stretcher, moved to an ambulance and carried to a hospital for more complete medical facilities and attention.

The purpose of the Lungventilator is to bring about the return of suspended respiration and restore the action of the nonfunctioning lungs in asphyxiated persons by insufflation of a volume of air, of pure oxygen or of an oxygen-carbon dioxide mixture, and exsufflation of the same under a predetermined pressure.

The United States Testing Company submitted a report on mechanical and physical characteristics of the Lungventilator. These tests, which were extensive in scope, substantiated the claims of the firm relative to safety of air pressure, both positive and negative. The Council investigator verified the report of the testing laboratory. After careful examination he reported that this apparatus is similar in principle and in function to at least one other apparatus already accepted by the Council.

The Council on Physical Medicine voted to accept the Lungventilator for use in operating rooms and in medical institutions when employed under the direction of a physician but voted not to accept it for use by lay organizations because evidence is not available that a layman has successfully resuscitated an asphyxiated person with it.

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SATURDAY, JULY 27, 1946

REPAIR OF CRANIAL DEFECTS

Grant and Norcross [1] suggest, after extensive review of the subject, that there is a happy accord among most authors as to the indications and contraindications for cranioplasty. The indications are (1) severe headache, dizziness, undue fatigability, vague discomfort at the site of the defect, a feeling of apprehension and insecurity, mental depression and intolerance to vibration, (2) epilepsy when the attacks originate from the injury that caused the defect, (3) danger of trauma at the site of the defect, (4) unsightly defects and (5) defects that pulsate unduly or that are painful. The contraindications are (1) the presence of any foreign body, (2) the presence of any possible infection either in brain or in bone, (3) increased cerebrospinal fluid pressure that is not easily reducible by lumbar puncture or (4) pathologic changes in the cell count or chemistry of the fluid. Cranioplasty should not be performed for some months after an injury unless the wound is undoubtedly clean. If there has been infection, the attempt is unsafe under one year's time.

Various materials were used to cover the defect, such as implantation graft of rib cartilage from the same person, osteoperiosteal grafts from tibia, ilium and scapula, heterografts of dead and sterilized cranial bone, the outer table of the skull with pedunculated flaps of periosteum and cranium, metals such as vitallium and tantalum and plastics of the acrylic type. Cartilage proved to be useful for the closure of small defects wherein the importance of a rigid graft is not so great. For the large defects an osteoperiosteal graft from the external table of the skull that may be either swung or thrown over into place or taken separately and placed in the defect has the advantage of being able to close the defect in a single operation and offer a firm protection. Money [2] stresses the advantages of large grafts taken from the inner table of the ilium; a large enough portion can be obtained in a single graft to fill in almost any deficiency. The graft is curved in the correct plane and can be molded further if necessary. Its inner surface is smooth and not likely to become adherent to the underlying dura even when it has been repaired or replaced by a graft of fascia. Its outer surface of cancellous bone invites a fresh blood supply from the overlying scalp to keep the graft alive. A roentgenogram taken after five years in 1 of his cases shows that the graft is practically intact and that a bony union has occurred at many places around the periphery. In another case some absorption has taken place during the thirteen years which have elapsed, and the clinical and cosmetic result has been satisfactory. Kazanjian and Holmes [3] report the results of plastic repair in 38 cases of postoperative osteomyelitis of the frontal bone in which they used bone cartilage, vitallium, tantalum and an acrylic to replace the lost frontal bone. They found cartilage useful for replacing small areas of lost bone or for improving the contour of the brow over a previous bone graft. Bone should be used to fill in defects up to 2½ inches in diameter. In larger areas it is much easier, and the cosmetic result on the whole is more satisfactory when one of the prepared plates is inserted. Fulcher [4] obtained an excellent cosmetic and functional result in a case of a large rounded defect of 3 by 4 cm. in the left frontal region, utilizing a tantalum implant. Robertson [5] reports the results in 26 cases of simple or compound depressed fractures of the skull, in 24 of which a single stage operation was performed, utilizing tantalum plates. He believes that this particular metal approaches the theoretical ideal for replacing lost portions of the cranium. The reaction of the tissues to the presence of tantalum is minimal. The thin, translucent implant, which forms an envelop about the metal, isolates nervous tissue from surrounding tissue and prevents fixation or traction of subsequently forming scar tissue. The chief advantages of tantalum from a surgical point of view are its chemical and electrical inertia and ductility. Elkins and Cameron [6] report their experience in 70 cases of skull defects repaired by acrylic plates made at the time of operation by means of an impression technic. The particular material chosen was a plastic known as methyl methacrylate, a polymer of methyl alpha acryiic acid esters commonly known as acrylic. Experimental work by Sheldon, Pudenz and others has demonstrated that there is practically no tissue reaction to this substance in experimental animals. According to Elkins and Cameron this material is sufficiently strong to insure permanence of repair. Excellent cosmetic results may be obtained with an impression technic. Permanent

1. Grant, F. C., and Norcross, N. C.: Repair of Cranial Defects by Cranioplasty, Ann. Surg. **110**: 488 (Oct.) 1939.
2. Money, R. A.: Repair of Cranial Defects by Bone Grafting, Surgery **19**: 627 (May) 1946.
3. Kazanjian, V. H., and Holmes, E. M.: Reconstruction after Radical Operation for Osteomyelitis of the Frontal Bone: Experience in 38 Cases, Surg., Gynec. & Obst. **79**: 397 (Oct.) 1944.
4. Fulcher, O. H.: Tantalum as a Metallic Implant to Repair Cranial Defects, J. A. M. A. **121**: 931 (March 20) 1943.
5. Robertson, R. C. L.: Repair of Cranial Defects with Tantalum, J. Neurosurg. **1**: 227 (July) 1944.
6. Elkins, C. W., and Cameron, J. E.: Cranioplasty with Acrylic Plates, J. Neurosurg. **3**: 199 (May) 1946.

postoperative complications have not occurred such as could be related to the material itself or to the method of inserting the acrylic plate.

From the accumulated experience in the treatment of war casualties, cranioplasty would seem to be indicated for conditions other than mere closure of the defect. Thus epilepsy is benefited by cranioplasty, although the reasons for this are not clear. The syndrome of the trephined is relieved in the large majority of cases, and the cosmetic results of cranioplasty are excellent.

AMINO ACID ACCELERATION OF WOUND HEALING

Earlier investigators noted that the in vitro proliferation of corneal cells can be accelerated by the addition of embryonic tissue extracts to the culture medium. Fischer [1] and others found later that a similar acceleration takes place in an artificial tissue culture in which amino acids furnish the building stones for the synthesis of protoplasm. Encouraged by these results, Schaeffer [2] of the University of Southern California studied the effects of local instillations of amino acids on the rate of healing of experimental wounds on the corneas of guinea pigs or rabbits.

Three types of corneal wounds were studied. In the first type, superficial vertical incisions were made across the cornea of both eyes by means of a Castroviejo double knife with blades 2 mm. apart, the epithelium between the two lines being evenly abraded with a spatula. In the second type a round superficial erosion 3.5 mm. in diameter was made with a trephine. In the third type a deep nonperforating wound was made with a trephine in each cornea 2.5 mm. in diameter and 0.4 mm. deep.

In all experiments the right eye was treated hourly with an amino acid solution or twice daily with an amino acid ointment, the left or control eye being similarly treated either with isotonic solution of sodium chloride or with an amino acid free ointment. The rate of healing for each eye was followed by periodically staining the cornea with fluorescein and plotting the fluorescein positive and fluorescein negative areas on logarithmic paper. By counting the number of stained and unstained squares, a quantitative expression of the healing process could be obtained.

The amino acid solution used in these tests was made in a 6 per cent solution of sodium chloride and contained 2 mg. of cystine, 5 mg. of proline, 6 mg. of asparagine and 14 mg. of glutamine per cubic centimeter. The ointment was prepared by emulsifying 70 Gm. of aquaphor with 30 cc. of the amino acid solution of tenfold concentration. The control ointment was a 5 per cent boric acid ophthalmic ointment. In a few tests the amino acids were incorporated directly in the boric acid ointment.

In 36 animals with the vertical 2 mm. erosion the average healing time was twenty-four hours in the treated eye and seventy-one hours in the control eye. With the round superficial erosion the average healing time was twenty-one hours in the treated eye and sixty-two hours in the control. In the eyes of animals with deep, nonperforating trephine wounds the averages were 47.5 hours and 101.5 hours respectively. Summarizing his data, Schaeffer concludes that the same phase of healing is reached after two days in the amino acid accelerated eye that is reached only after six days in the nonaccelerated control eye. This is equivalent to a threefold speed-up of wound healing as a result of the forced instillation of amino acid.

The ointment has not been employed alone. Detailed clinical data are promised for the near future. Until such studies have been reported and subjected to critical analysis, the local use of amino acids to accelerate wound healing can be considered merely as an interesting experimental observation.

1. Fischer, A.: Acta physiol. Scandinav. **2**: 143, 1941.
2. Schaeffer, A. J.: Proc. Soc. Exper. Biol. & Med. **61**: 165 (Feb.) 1946.

Current Comment

UTAH PROTESTS PROPAGANDA HEARINGS BEFORE THE CONGRESS

Recently Dr. Ray T. Woolsey, president of the Utah State Medical Association, addressed a letter to Senator Thomas of that state protesting against reporting out the so-called Pepper maternal and child welfare bill without adequate hearings. The letter succinctly emphasizes several important points which may well guide others when confronted with a similar situation. The final action taken by the committee was a compromise, as reported in last week's issue of THE JOURNAL, in which the committee recommended additional funds to be appropriated under the Social Security Act for this purpose. The letter of Dr. Woolsey reads:

We are just in receipt of advice that S. 1318, known as the Pepper Maternal and Child Welfare bill, is scheduled for discussion in executive session of the Senate Committee on Education and Labor early next week. We have hitherto taken the liberty of writing to you expressing our opposition to this type of legislation and again wish to emphasize our stand.

This type of legislation, in the opinion of the council and house of delegates of the Utah State Medical Association, is inimical to the best interests of the mothers and children of our country. The medical profession is definitely interested in the improvement of medical care, and we believe the history of the development of medicine in this country is sufficient proof not only of that interest but the splendid results gained under the American method of the practice of medicine, those results being far superior to those attained in Europe.

We specifically urge that no action be taken on this bill and no recommendations be made by the committee until ample opportunity has been provided in open hearings for members of the medical profession and other interested individuals and groups to be heard. It may interest you to know that the Presiding Bishopric and Council of the Mormon Church have expressed themselves as unalterably opposed to this type of legislation and if afforded an opportunity will make known their stand in open hearing.

The war is over and it is high time that civilian and professional life be freed of bureaucratic stifling controls and meddling. We object to what appears to be a packing of such hearings as have been held with representatives of governmental agencies, and there are those among the citizenry of Utah, both in professional and private life, who would be only too glad to be heard on these important matters if opportunity were afforded.

SHADOWED ELECTRON MICROGRAPHS OF VIRUSES

In 1945 a new technic in electron micrography was perfected by Williams and Wyckoff [1] of the Department of Physics, University of Michigan. Earlier investigators had found that many particles of biologic origin cannot be observed by the electron microscope because they do not deflect an adequate percentage of incident electrons. Staining with phosphotungstic acid effectively increased the deflection index of certain biologic structures [2] but was not generally effective with viruses. Williams and Wyckoff therefore applied a method of "shadow casting" originally developed as a method of measuring the heights of objects by means of the electron microscope.[3] In this method an exceedingly thin layer of metal is deposited obliquely on the preparation. Molecules of metal evaporated in vacuo fall on the preparation at a "grazing" angle. The shape and length of the resulting "shadow" furnish a basis of judgment as to the height and shape of the exposed particle. Chromium and gold were found to be the most satisfactory metals. These were deposited in a layer of about 8 millimicrons calculated thickness, under an angle that produces a shadow three and a half to ten times the height of the shadowed particle. Applying this technic, Williams demonstrated that dried PR-8 influenza virus smears contain numerous globules. Each was about 75 millimicrons in diameter. There were a number of chains or aggregates resembling streptococci or staphylococci. Similar preparations of tobacco mosaic protein contain fine fibrils of variable length but of a more or less constant diameter (15 millimicrons). Sharf and his associates [4] of the Department of Surgery, Duke University School of Medicine, have recently applied the same shadow technic to a study of bacteriophage, vaccinia and rabbit papilloma virus. Both gold and chromium were used as the deposited metal. The metals were evaporated in a vacuum chamber by a conical helix of tungsten wire through which a high voltage alternating current was passing. The evaporated metal was usually deposited at an angle that would give a shadow three and a half to five times the height of the virus particle. Shadowed micrographs showed the rabbit papilloma virus as an oblate spheroid whose polar diameter was about two thirds its equatorial diameter. Vaccinia virus appeared approximately rectangular. It had a fried egg profile, presumptive evidence of a nuclear internal structure. Its surface markings suggested a fibrous or bubble-like superficial texture. Escherichia coli T_2 bacteriophage revealed a tadpole shaped image. This consisted of a large hexagonal head, to which was attached a stubby tail with a ball or disk shaped terminal knob. The shadow micrographs thus reveal details of virus and bacteriophage structure not demonstrated by the earlier electronic technics. The new pictures suggest that the virus particle is a much more highly evolved biologic unit (or aggregate) than is currently assumed. Applications of the shadow technic to other virus types are now in progress.

1. Williams, R. C., and Wyckoff, R. W. G.: Proc. Soc. Exper. Biol. & Med. **58**: 265, 1945.
2. Jakus, M. A.; Hall, C. E., and Schmitt, F. O.: J. Am. Chem. Soc. **66**: 313, 1944.
3. Williams, R. C., and Wyckoff, R. W. G.: J. Applied Physics **15**: 712, 1944.
4. Sharf, D. G; Taylor, A. R.; Hock, A. E., and Beard, J. W.: Proc. Soc. Exper. Biol. & Med. **61**: 259 (March) 1946.

QUARANTINE AGAINST POLIOMYELITIS

This year, as in previous years, some sections of the country have developed an exceptionally high incidence of poliomyelitis. A few cities in southern Florida were involved in this manner. One of the neighboring states considered the establishment of a quarantine against Florida residents. Georgia actually imposed such a quarantine against all persons coming from the former state, even including Pensacola, which is 402 miles from the nearest city in which there has been an outbreak of poliomyelitis that could possibly be considered as epidemic in nature. The usefulness of this interstate quarantine is highly questionable. The overwhelming consensus of authorities in epidemiology and public health is that such interstate quarantine does not serve any useful purpose in preventing the spread of poliomyelitis. In the absence of more specific knowledge on the methods of spread of the poliomyelitis virus than is now available, state quarantine can only be considered reminiscent of the old practice of shot-gun quarantine against yellow fever before learning the role of the yellow fever bearing mosquito.

DIPHTHERIA MORTALITY

Elsewhere in this issue (page 1053) appears a review of the diphtheria deaths in the larger cities of the United States during 1945. This is the first review since 1942; it indicates a definite increase in the incidence of diphtheria throughout many sections of the country. In one of the ninety-three cities there was a death rate from diphtheria in excess of 10 per hundred thousand (Knoxville) and in two (Spokane and Fort Worth) the rates were in excess of 5. There were 108 more deaths from diphtheria in 1945 than the low reported in 1941. The increase in deaths has been spotty. War travel may have been associated with the increase in incidence in diphtheria, especially on the coasts. A few persons with diphtheria reported exposure to returning veterans who were demonstrated to be diphtheria carriers through skin or wound infections. Whatever the causes for the increase during 1945, redoubled efforts toward immunization and control measures are indicated if the trend toward elimination of diphtheria is not to be reversed.

MEDICINE AND THE WAR

ARMY

MEDICAL SERVICE CORPS

Major Gen. Norman T. Kirk, the Surgeon General, recently submitted plans to the War Department for a regrouping of three Medical Department branches as a Medical Service Corps.

In General Kirk's plan legislation will be sought to organize a Medical Service Corps which would place pharmacy, sanitary and medical administrative corps under one table of organization.

Additional duties for pharmacists are also outlined in the plan. Provisions are made for a pharmacist officer to serve in the Office of the Surgeon General, acting as adviser to the Surgeon General on all pharmacy matters and directing pharmaceutical activities of the Medical Department.

Pharmacist officers would be charged with the purchase, examination, shipment, storage and standardization of the drugs and medical supplies of the Army. In command functions they would be placed in charge of all types of medical supply depots as well as subordinate positions in the depot. They would be named assistants to surgeons in battalions and regiments, as commanders of headquarters and medical battalion units, adjutants, medical and general supply officers and laboratory officers in medical and general laboratories. Duty as instructors at training schools is also planned.

Under the plan pharmacists would be qualified to serve as pharmacy officer, executive officer, adjutant, supply officer, mess officer, registrar, evacuation officer, hospital detachment commander and detachment of patients commander. More authority would be given pharmacists in combat units, serving as medical and general supply officers to medical groups and battalions and commanding ambulance units.

In explaining his plan to the Senate Military Committee last January, General Kirk said that this new corps would also include officer personnel in optometry, sanitary engineering, biochemistry, parasitology, entomology, bacteriology, serology, physiologic chemistry, clinical psychology, and allied science or administrative positions. He said the new corps was designed to include those who have qualifications and degrees to supplement and be adjuncts to the Medical Corps "but who are not truly professional men as are doctors of medicine or doctors of dentistry."

GARDINER GENERAL HOSPITAL WILL BE FIFTH ARMY HEADQUARTERS

In response to requests for the conversion of the Gardiner General Hospital, Chicago, for nonmilitary use, Secretary of War Robert P. Patterson announced recently that it was necessary for the War Department to retain the property as headquarters for the Fifth Army and Fifth Army Area.

In making the announcement the secretary said that a thorough survey of other available sites for the army headquarters had shown the federally owned property now occupied by Gardiner Hospital as the most suitable. He added that he had reluctantly turned down a request of the Federal Public Housing Authority to convert the hospital into a housing unit.

GENERAL KIRK AND COLONEL GARDNER RECEIVE BRAZILIAN AWARDS

Honorary memberships in the Brazilian Academy of Military Medicine were recently bestowed on Major Gen. Norman T. Kirk, Surgeon General of the Army, and Col. Leon L. Gardner, M. C., director of the Army Medical Library.

The coveted honors were awarded General Kirk and Colonel Gardner following a recommendation by Major Gen. Florencio de Abreu, the Surgeon General of the Brazilian army. General de Abreu and his party inspected medical installations in the Zone of the Interior early this year on an extended tour of the country.

ARMY AWARDS AND COMMENDATIONS

Lieutenant Colonel Maurice A. Walker

The Army Commendation Ribbon was recently awarded to Lieut. Col. Maurice A. Walker, formerly of Chicago, "for meritorious service as safety consultant, Baxter General Hospital, Spokane, Wash., from Jan. 1, 1944 to Oct. 15, 1945. In addition to his duties as chief of surgical service Lieutenant Colonel Walker was responsible for conducting and maintaining a safety program which, through his zeal and unremitting efforts, resulted in an outstanding record of 4,312,316 man hours of work accomplished without loss of time due to accidents. His superior performance of duty contributed materially to the welfare of employees at this hospital." Dr. Walker graduated from Rush Medical College, Chicago, in 1928 and entered the service Sept. 12, 1942.

Lieutenant Colonel Joseph E. Milgram

Lieut. Col. Joseph E. Milgram, Brooklyn, was recently awarded the Legion of Merit "for exceptionally meritorious conduct in performing outstanding services as chief of the orthopedic section at Schick General Hospital, Clinton, Iowa. The citation further stated that "from February 1943 to January 1946 he devised many surgical reconstructive procedures and programs and maintained the highest standards of scientific orthopedic treatment at this installation. His services were rendered with an unselfish devotion to the welfare of the sick and wounded." Dr. Milgram graduated from Columbia University College of Physicians and Surgeons, New York, in 1924 and entered the service Sept. 24, 1942.

Brigadier General Addison D. Davis

Brig. Gen. Addison D. Davis was recently awarded the Legion of Merit for his outstanding services as commandant of the Medical Field Service School, Carlisle Barracks, Carlisle, Pa., from April 1941 to February 1946. Twenty-seven thousand medical department officers received training there and more than 4,600 officer candidates for Medical Administration Corps commissions were students at Carlisle. General Davis graduated from the Jefferson Medical College of Philadelphia in 1906 and has been in the service since June 2, 1909.

Lieutenant Colonel James T. McGibony

Lieut. Col. James T. McGibony, Washington, D. C., was recently awarded the Legion of Merit for his exceptional services as assistant and later director, Hospital and Domestic Operations Division, Office of the Surgeon General, from July 1944 to March 1946. He was administrative supervisor of all army hospitals in the Zone of the Interior. Dr. McGibony graduated from Emory University School of Medicine, Atlanta, Ga., in 1935 and entered the service July 1, 1936.

Captain John A. Knapp

The United States of America Typhus Commission Medal was recently awarded to Capt. John A. Knapp, London, Ohio. The citation stated that "Captain John A. Knapp rendered meritorious service in connection with the work of the United States of America Typhus Commission in Burma and also Assam during the period from May to November 1945." Dr. Knapp graduated from the University of Wisconsin Medical School, Madison, in 1933 and entered the service July 24, 1942.

Lieutenant Colonel Baldwin H. E. W. Lucke

Lieut. Col. Baldwin H. E. W. Lucke, Washington, D. C., was recently awarded the Legion of Merit for outstanding services as deputy director, Army Medical Museum, and as deputy and acting director, Army Institute of Pathology, from Medico-Chirurgical College of Philadelphia in 1912 and entered March 1942 to February 1945. Dr. Lucke graduated from the the service March 21, 1942.

PHYSICIANS SEPARATED FROM SERVICE

ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

Alabama

Byer, Louis.....Tuscaloosa
Dickson, Leon A.....Tuskegee
Ford, Harold V.....Tuscaloosa
Harris, Ralph N.....Tuscaloosa
North, William E.....Prichard
Perry, Ezra B.....Bessemer
Pitts, Charles N.....Tuskegee
Williams, Arthur G. Jr.....Floralo

Arizona

Frey, Charles T.....Sacaton
Hornyak, William J.....Whipple
Keller, Louis.....Whipple
Noon, Zenas B.....Nogales

Arkansas

Hawkins, William B...North Little Rock
Hoover, Paul W.....Little Rock
Loftis, William O.....Pocahontas
McGill, Albert G. Jr.....Little Rock
Majka, Frank A.....North Little Rock
Means, Ben D.....Little Rock
Pate, Virgil A. Jr.....Little Rock
Perkins, Richard L.....Wilmot
Siddon, William H.....Wilson
Ward, Wendell P.....Fordyce

Colorado

Barnacle, Clarke H.....Denver
Dart, Merrill O.....Denver
Garrison, George E.....Fort Collins
Hampton, Daniel E.....Denver
Harrington, John F.....Denver
Nelson, Oscar A.....Lemar
Smith, Howard C.....Colorado Springs

Connecticut

Cornelio, Francis J.....Winsted
Kettle, Ronald H.....Norwich
Martin, Raymond A.....Bridgeport
Pasetto, Edo.....Waterbury
Sklaver, Joseph.....Waterbury
Tepperman, Sidney J.....New Haven
Weed, Chester A.....Torrington
Zaglio, Edmond R.....Manchester

Florida

Falk, Jack J.....Miami Beach
Groves, Wyatt H.....Clearwater
Harris, Willis W.....Bee Ridge
Hay, Isaac M.....Melbourne
Ikeler, Earl R.....St. Petersburg
Johnson, James K.....Miami
McHale, Donald G.....Miami
Mertz, Robert B.....Tampa
Murphey, David R. Jr.....Tampa
Pearlman, Carl K.....St. Lake City
Pearson, Julius R.....Miami Beach
Peek, Cecil McL.....West Palm Beach
Pena, Eduardo F.....Miami
Scott, David H.....Arcadia
Silsby, Harry Z.....New Smyrna Beach
Slaughter, Frank G.....Jacksonville
Weeks, Theodore W. Jr...Moore Haven
Williams, Reden R. Jr.....Tampa

Georgia

Gladden, Joseph R.....Atlanta
Hanner, James P.....Atlanta
Henry, Jennings L.....Atlanta
Ingram, Aldean S.....Atlanta
Jones, Robert E.....Tifton
McKemie, Howard M.....Albany
Powell, Vernon E.....Atlanta
Rice, Guy V. Jr.....Albany
Scheinman, Leonard.....Augusta
Seitz, Sam M.....Atlanta
Steed, William A.....Augusta
Watson, Otho O'Dell.....Macon
Wood, James A.....Macon

Idaho

Krotcher, Lester C.....Twin Falls
Shuell, Gerald J.....Boise
Stone, Harold W.....Boise
Westfall, Marvin F.....Boise
Winsberg, James A.....Boise

Indiana

Bigsby, Frank L. Jr.....Evansville
Boyer, Edward B.....Indianapolis
Britton, Welbon D.....Beech Grove
Davis, Daniel.....Marion
Heck, Martin C.....Jasper
Hibner, Nolan A.....Indianapolis
Hockett, Harry G.....Marion
Iske, Paul G.....Indianapolis
Kudele, Louis T.....Whiting
LaBier, Clarence R.....Terre Haute
Ladine, Clarence B.....Indianapolis
Lefforge, Edward E...North Manchester
Libbert, Edwin L.....Lawrenceburg
Lingeman, Roger E.....Indianapolis
Megenhardt, Dennis S.....Indianapolis
Reiss, Jack.....Indianapolis
Riley, William J.....Indianapolis
Ritteman, George W.....Indianapolis
Sheehan, Francis G.....Indianapolis
Smith, John H.....Bloomington
Smith, Joseph S.....Indianapolis
Staff, Robert A.....Rockville
Vermilya, Robert W.....Brownstown
Westfall, B. Kemper.....Lebanon
Wilhelmus, Charles K.....Newburgh
Wilkinson, Roger L.....Anderson
Woods, James R.....Greenfield

Iowa

Bogan, Robert J.....Des Moines
Buchtel, Buell C.....Corydon
Couch, Orrie A. Jr.....Iowa City
Edwards, Ralph R.....Centerville
Hoechstetter, Stanton S.....Des Moines
Montgomery, Guy E.....Keota
Ryan, Charles.....Iowa City
Silverstone, Eugene H.....Iowa City
Stegeman, Abraham M.....Tripoli
Thompson, Elvin D.....Jefferson
Turner, Howard V.....Des Moines
Wilson, Fredric W.....Sioux City

Kansas

Goldblatt, Bernard.....Kansas City
Pees, Gerald B.....Iola
Sekavec, Gordon B.....Athol
Speirs, Eugene R.....Kinsley
Vetter, Ronald C.....Lawrence
Williams, Edward V.....Ellsworth
Young, Chester L.....Kansas City

Kentucky

Baker, Samuel R.....Lexington
Cummings, John R.....Flemingsburg
Gail, Irving A.....Lexington
Garner, John R.....Hopkinsville
Guiglia, Alphonso.....Louisville
Hayes, Rex E.....Glasgow
Hess, Peter W.....Lexington
Hoffman, Carl G.....Southgate
Jasper, Robert B.....Somerset
Kaminski, Theodore J.....Pikeville
Leigh, Armistead M.....Louisville
Lipton, Philip.....Outwood
McCollum, Wendell D.....Paris
Mahon, George S.....London
Pigman, Carl.....Whitesburg
Rabold, Leonard J.....Bowling Green
Rice, John R.....Hopkinsville
Sehlinger, George A.....Louisville
Williams, Samuel E.....Lexington
Wolfe, William C.....Louisville
Woods, Clifford C.....Ashland
Young, David P.....Lexington

Louisiana

Archinard, John J.....New Orleans
DeLeo, Caesar A.....New Orleans
Finèberg, Henry H.....New Orleans
Hollister, Arthur C. Jr.....New Orleans
Kaplan, Isaac W.....New Orleans
Levi, Sam.....New Orleans
Melancon, William.....Carencro
Musso, Joseph P.....Sunshine
Warren, Albert S.....New Orleans

Maine

Gagnon, Bernard H.....Houlton
Hill, Paul S. Jr.....Saco
Paine, Stanley A.....Dexter
Ross, Maurice.....Biddeford
Ventimiglia, William A.....Togus

Maryland

Hecht, Morton Jr.....Baltimore
Hymowitz, Abraham.....Perry Point
Irey, Hugh W.....Avondale
Lockard, James D.....Reisterstown
Meranksi, Israel P.....Baltimore
Morrison, Benjamin G.....Perry Point
Mugmon, Leo H.....Hyattsville
Pearcy, Thompson.....Baltimore
Randolph, Middleton E.....Baltimore
Renner, William F.....Frederick
Taylor, Ingram C.....Bethesda
Thomas, Henry M. Jr.....Baltimore
Trollinger, Arvin E.....Perry Point

Massachusetts

Marmer, George.....Lynn

Michigan

Brownlee, William McC.....Ann Arbor
Conrad, Maynard M.....Kalamazoo
Ewing, Charles H.....Grosse Pointe
Gardner, Joe H.....Lansing
Heavenrich, Robert M.....Saginaw
Hoffman, Howard B.....Ludington
Ivkovich, Peter.....Detroit
Lapham, Fred E.....Detroit
McKenna, Joseph L.....Grand Rapids
Murphy, Bernard M.....Jackson
Orr, William R.....Detroit
Owen, Clarence I.....Detroit
Perry, Alvin LaF.....Detroit
Pliskow, Harold.....Detroit
Posthuma, Millard.....Grand Rapids
Reisig, Albert H.....Monroe
Sewall, Lee G.....Fort Custer
Simpson, Robert S.....Battle Creek
Smith, Carleton A.....Pontiac
Stoll, Edward M.....Ellise
Strayer, John W.....Buchanan
Trescott, Robert F.....Lansing
Troester, George A.....Detroit
Woodburne, Harris L.....Bay City
Worthington, Ralph.....Detroit
Zielke, Irwin H.....Traverse City

Minnesota

Baldigo, Edward M.....Red Wing
Friberg, Robert A.....Winchester
Gjerde, William P.....St. Paul
Howe, Newell W.....St. Paul
Ivie, Joseph McK.....Rochester
Mark, Hilbert.....Minneapolis
Mollers, Theodore P.....Mountain Iron
Olson, Stanley W.....Rochester
Seery, Thomas M.....Minneapolis
Sigmond, Harley M.....Minneapolis

Mississippi

Dunn, Maurice.....Gulfport
Hay, Elliott B.....McComb
Kety, Seiberth S.....Picayune
Noel, Edmond F.....Jackson
Vanderhoof, Richard C.....Aberdeen

PHYSICIANS SEPARATED FROM SERVICE

Montana

Scanlon, John J.....Anaconda

Nebraska

Hayes, Jack M.....Omaha
Hirschfeld, Beryl.....N. Platte
Lennemann, Ernest E.....Falls City
Mullin, Richard F.....Lincoln
Olsson, Paul B.....Lexington
Osborne, Melvin P.....Omaha
Rogers, Earl A.....Lincoln
Thompson, Lynn W.....Omaha
Waters, Chester H. Jr.....Omaha

Nevada

Blatt, Samuel E.....Reno
Schlosser, Joseph.....Reno
Work, Philip.....Reno

New Jersey

Barlow, John D.....Hightstown
Brown, Milton B.....Carteret
Einhorn, Edward H.....Somerville
Fortuin, Floyd.....Paterson
Harms, Charles R.....Westfield
Hawke, Edward K.....Newton
Irwin, Robert C.....Lyndhurst
Judge, Thomas V. Jr.....Caldwell
Landshof, Charles A.....Jersey City
Loeb, William A.....Lyons
Masiello, Carmine J.....Union City
Michaels, Joseph.....Lyons
Miller, Samuel R.....Pennington
Nickman, Emanuel H.....Atlantic City
Onorato, Vincenzo R.....Montclair
Parent, Sol.....Newark
Pecora, Samuel J.....Newark
Reik, Louis E.....Princeton
Rodman, Ellwood W.....Beverly
Roecker, Roland D.....Millington
Rosin, Robert F.....Plainfield
Runyon, William N.....Plainfield
Shanik, William.....Asbury Park
Sherman, Irving J.....Wildwood
Terrafranca, Raymond J...W. New York
Wolcott, George L.....Asbury Park
Woronoff, Murray.....Keyport

North Carolina

Brown, Robert N.....Asheville
Glasser, Joseph.....Asheville
Hill, William H.....Albemarle
Johnston, Frank R.....Winston-Salem
Kavanagh, William P.....Cooleemee
Randolph, Robert P.....Durham
Roberts, Louis C.....Durham
Sedofsky, Nathan.....Asheville
Souther, Wallace E.....Fletcher
Titche, Leon L.....Asheville
Wiggins, John C. Jr.....Winston Salem
Wolfe, Ralph V.....Winston Salem

North Dakota

Diamond, Jack L.....Fargo
Durnin, William G.....Bottineau
Einterz, George F.....North Fargo
Vollmer, Frederick J.....Grand Forks
Wilsey, David B.....Bismarck

Ohio

Anzinger, Robert J.....Springfield
Brady, Richard M.....Akron
Carter, John A.....Middletown
Cellio, Lewis W.....Carrollton
Corso, Paul.....Salem
Crosby, Harold O.....Findlay
Cross, Virgil L.....Athens
Dixon, James G.....Cincinnati
Doster, Gaile L.....Paulding
Dreyfuss, William.....Cleveland
Eckel, Harold W.....Cincinnati
Ewing, Joseph W.....Akron
Farmer, Howard.....Fletcher

Ohio—Continued

Ferreri, Eugene A....University Heights
Fink, Myron.....Toledo
Hyman, Barnett M.....Chillicothe
Jones, Ernest F.....Dayton
Lawrence, Hans W...University Heights
Libecap, Irvin L.....Cleveland
Lieder, Louis E.....University Heights
Light, Richard C.....Lima
Lutz, John R.....North Ridgeville
Malong, Edmund W.....Cleveland
Martin, William J.....Fremont
Matthews, Charles W.....New Vienna
Meyer, Paul D.....Cleveland
Moore, Kenneth G.....Dayton
Parke, George K.....Akron
Parkinson, Dee R.....Dayton
Payne, Leonidas W. III.....Willoughby
Pease, Horatio T.....Wadsworth
Pelton, Bernard L.....Toledo
Phillips, Charles A.....Toledo
Prugh, Reed C.....Dayton
Rardin, Thomas E.....Columbus
Reps, Dewey H.....Cincinnati
Rhodes, William M.....Columbus
Rice, Milo B.....Pandora
Schoene, Robert H.....Columbus
Sogg, Solomon S.....Cleveland
Sroufe, Douglas G.....Cincinnati
Tischler, George A.....Cleveland
Vaughan, William T.....Akron
Vinson, Charles S.....Franklin Furnace
Walker, John M.....Dayton
Weaver, Samuel W.....Youngstown
Werner, Marshall R.....Akron
Whitacre, James F.....Toledo

Oklahoma

Franklin, Samuel E.....Broken Arrow
Jondahl, Willis H.....Tulsa
McInnis, James T.....Muskogee
Matthews, Newman S....Oklahoma City
Robinson, Earl W.....Nash
Webster, William H.....Ada
Wilhite, Lee Roy.....Perkins

Oregon

Edblom, Lester A.....Eugene
Feves, Louis J.....Pendleton
Horenstein, Marcus M.....Portland
Loehner, Conrad A.....Salem
Nebel, Samuel F.....Portland
Shasky, Florian J.....Portland
Varney, George C.....Oakridge
Wiley, David R.....Portland
Wooliever, Francis J.....Portland

Rhode Island

Damarjian, Edward.....Providence
Forgiel, Ferdinand S.....Central Falls
Gershman, Isadore.....Providence
Portnoy, Bradford M. S.....Providence
Stevens, Raymond T.....Providence

South Dakota

Rosen, Michael.....Fargo

Tennessee

Chambliss, James C. Jr.....Nashville
Graber, William J.....Beaumont
Hankins, Walter D.....Johnson City
Harris, Henry S.....Farner
Herring, Artye L.....Memphis
Molloy, Laurence B.....Nashville
Moore, George B.....Murfreesboro
Phillips, Jim S.....Rocksprings
Record, William D. L.....Chattanooga
Simmons, Melvin M.....Nashville
Stockman, John M.....Knoxville
Taylor, Owen H. Jr.....Ridgely
Wallace, James A.....Memphis
Weber, Alvin J.....Knoxville
Wener, Samuel I.....Memphis

Texas

Alexander, John E. Jr.....Tyler
Allison, Harold T.....Waco
Aurin, Fred B.....Ft. Worth
Branch, George R. Jr.....Bryan
Cohen, Frank.....Dallas
Conolly, Sidney McLean.....Austin
Coventry, William V.....Springlake
Covode, William M.....Port Arthur
Ewing, Ferdinand S.....Sinton
Funk, Theron H.....Fort Worth
Gardner, Irvin B.....Houston
Gilbert, Howard P.....Houston
Harris, Hunter P.....Fulshear
Hubner, Alan E.....Houston
Jones, Robert R.....Pasadena
Kilgore, Newton A.....Houston
Kingsley, Roy E.....Dallas
Lee, Richard H.....Dallas
Legett, Carey Jr.....Houston
McElroy, Robert B.....Rogers
Moore, Rufus D. Jr.....Omaha
Muirhead, James J.....Vernon
Pickett, Walter F.....Dallas
Rogers, Frederick F.....Galveston
Shelton, Joel A.....Sonora
Snidow, Francis A.....El Paso
Tate, George W.....Longview
Wallace, John L. Jr.....Fort Worth

Vermont

Allen, Joel.....Burlington
Del Giudice, A.....Waterbury
Jones, John P.....White River Junction
Levine, Emanuel.....West Rutland
Stoddard, Paul McL.....Peacham

Virginia

Frieden, Harry M.....Norfolk
Holland, Charlton G. Jr.....Danville
Jackson, Isaiah Allen Jr.....Richmond
Joyner, George R.....Suffolk
Turner, Vernon A.....Staunton

Washington

Bolton, Robert E.....Kennewick
Clayberg, Harold D.....Tacoma
Dewey, Leonard A.....Seattle
Harris, Leland S.....Yakima
James, Frank H.....Tacoma
Johnson, Fordyce A. H.....Tacoma
Laige, Raymond J.....Seattle
McConville, Bernard E.....Seattle
Marcovitch, Joseph.....American Lake
Moore, Troy.....Olympia
Movius, Earnest A.....Spokane
Sorenson, Philip W.....S. Tacoma
Whatmore, Joseph H.....Seattle

West Virginia

Armentrout, Aubrey W.....Martinsburg
Evans, George F.....Clarksburg
Hovis, Logan W.....Parkersburg
Lilly, Goff P.....Charleston
Mangus, Julian E.....Pineville
Monaco, Joseph T.....Elkins
Peterson, Vernon L.....Charleston
Schwartz, Felix.....McKendree

Wisconsin

Bookhamer, James W.....Milwaukee
Gordon, Edgar S.....Madison
Guest, Russell L.....Kenosha
Hansher, Ervin.....Milwaukee
Primakow, Max J.....Wood
Rendok, John H.....Janesville
Rogers, Sion C.....Madison
Shirley, Amos R.....Wood
Smith, Philip W.....Racine
Stein, William.....Milwaukee
Vogl, Henry L.....Milwaukee

ORGANIZATION SECTION

PROCEEDINGS OF THE SAN FRANCISCO SESSION

MINUTES OF THE NINETY-FIFTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN SAN FRANCISCO, JULY 1-5, 1946

MINUTES OF THE SECTIONS

SECTION ON INTERNAL MEDICINE

WEDNESDAY, JULY 3—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. William D. Stroud, Philadelphia.

Dr. E. M. Chapman, Boston, read a paper on "Treatment of Hyperthyroidism with Radioactive Iodine." Discussed by Drs. Mayo H. Soley, San Francisco, and Earl R. Miller, San Francisco.

Dr. James A. Shannon, New York, read a paper on "A Consideration of Some of the Newer Antimalarials." Discussed by Dr. Harry Most, Swannanoa, N. C.

Dr. Walter L. Bierring, Des Moines, Iowa, introduced Dr. R. T. Woodyatt, Chicago, who read the Frank Billings Lecture on "Diagnostic Problems of Diabetes."

Dr. DeWitt Stetten Jr., New York, read a paper on "Newer Concepts of the Endocrine Regulation of Carbohydrate Metabolism." Discussed by Lieut. Laurance W. Kinsell (MC), U.S. N.R., and Dr. Samuel Soskin, Chicago.

Drs. Carl V. Moore and Irwin Levy, St. Louis, presented a paper on "The Antianemic Activity of Lactobacillus Casei Factor ('Folic Acid')." Discussed by Drs. Tom D. Spies, Birmingham, Ala.; M. M. Wintrobe, Salt Lake City; F. S. Daft, Bethesda, Md., and William J. Darby Jr., Nashville, Tenn.

THURSDAY, JULY 4—AFTERNOON

The following officers were elected: chairman, Joseph T. Wearn, Cleveland; vice chairman, Roy H. Turner, New Orleans; secretary, C. J. Watson, Minneapolis; executive committee, B. O. Raulston, Los Angeles; William D. Stroud, Philadelphia; Joseph T. Wearn, Cleveland; delegate, C. T. Stone, Galveston, Texas; alternate, W. D. Stroud, Philadelphia; representatives to American Board of Internal Medicine, Hugh J. Morgan, Nashville, Tenn.; Marion A. Blankenhorn, Cincinnati; Le Roy H. Briggs, San Francisco; member of board of trustees of Frank Billings Trusteeship Fund, Cecil J. Watson, Minneapolis; trustee at large, Ernest E. Irons, Chicago.

It was voted that the Frank Billings Lectureship Fund now held in Des Moines, Iowa, be transferred to the custody of the Treasurer of the American Medical Association to be administered by the Trustees of the fund.

Dr. George V. LeRoy, Chicago, read a paper on "Physical Sequelae of the Atomic Bomb Explosion." Discussed by Dr. Verne R. Mason, Los Angeles.

Drs. Edwin O. Wheeler, Paul D. White and William B. Bridges, Boston, presented a paper on "The Low Sodium Diet in Congestive Heart Failure."

Drs. T. R. Harrison, Francis Reichsman and Harold Grant, Dallas, Texas, presented a paper on "Studies of the Pathogenesis of Peripheral Edema in Congestive Heart Failure."

These two papers were discussed by Drs. James V. Warren, Atlanta, Ga.; F. R. Schemm, Great Falls, Mont.; George E. Burch, New Orleans, and Frederick M. Allen, New York.

Dr. William D. Stroud, Philadelphia, read the chairman's address, entitled "Optimism in Medicine."

Dr. Maurice S. Segal, Boston, read a paper on "Penicillin Aerosolization in the Treatment of Lobar Pneumonia, Bronchiectasis and Lung Abscess." Discussed by Drs. William J. Kerr, San Francisco; Alvan L. Barach, New York, and A. M. Olsen, Rochester, Minn.

Dr. D. T. Smith, Durham, N. C., read a paper on "Fungous Diseases Encountered in a General Hospital Practice." Discussed by Drs. C. E. Smith, San Francisco, and John F. Kessel, Los Angeles.

FRIDAY, JULY 5—MORNING

A joint meeting was held with the Section on Experimental Medicine and Therapeutics. The proceedings are reported in the minutes of that section.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

WEDNESDAY, JULY 3—MORNING

The meeting was called to order by the chairman, Dr. Daniel C. Elkin, Atlanta, Ga., at 9 o'clock.

Drs. Thomas B. Aycock and James W. Hendrick, Baltimore, presented a paper on "The Problem of Phlebothrombosis and Thrombophlebitis."

Drs. Leo Loewe and Edward Hirsch, Brooklyn, presented a paper on "Heparin in the Treatment of Thromboembolic Disease."

Drs. Arthur W. Allen, Robert R. Linton and Gordon A. Donaldson, Boston, presented a paper on "Venous Thrombosis and Pulmonary Embolism: Comparative Study of Femoral Vein Interruption and Dicumarol Therapy."

These three papers were discussed by Drs. J. Ross Veal, Washington, D. C.; Alton Ochsner, New Orleans; Fred W. Bancroft, New York; Geza de Takats, Chicago; Kurt Lange, New York, and Ralph Adams, Boston.

Dr. Geza de Takats, Chicago, read a paper on "Sympathectomy for Peripheral Vascular Sclerosis." Discussed by Drs. Felix Pearl, San Francisco; Alton Ochsner, New Orleans, and Robert A. Katz, New Orleans.

Drs. E. Craig Heringman, James D. Rives and Harry A. Davis, New Orleans, presented a paper on "The Evaluation of Operative Procedures for Repair of Arteriovenous Fistulas: Statistical Analysis of 53 Cases." Discussed by Drs. Emile F. Holman, San Francisco; Major Norman E. Freeman, M. C., A. U. S., and J. Ross Veal, Washington, D. C.

Drs. E. S. Gurdjian and J. E. Webster, Detroit, presented a paper on "Newer Concepts in the Mechanism and Management of Head Injury." Discussed by Major Earl Walker, Cushing General Hospital, Framingham, Mass.

Dr. Ralph Herz, Cleveland, read a paper on "Herniation of Subfascial Fat as a Cause of Low Back Pain: Results of Surgical Treatment." Discussed by Drs. Philip S. Hench, Rochester, Minn., and C. Lee Graber, Cleveland.

THURSDAY, JULY 4—MORNING

The following officers were elected: chairman, Dr. Alton Ochsner, New Orleans; vice chairman, Dr. John B. Flick, Philadelphia; secretary, Col. Michael E. DeBakey, M. C., A. U. S.; delegate, Dr. Grover C. Penberthy, Detroit; alternate, Dr. I. A. Bigger, Richmond, Va.; member of the Commission on Industrial Health, Dr. Charles B. Puestow, Chicago; members of the Board of Governors of the American College of Surgeons, Dr. Thomas M. Joyce, Portland, Ore., and Dr. Charles S. Kennedy, Detroit; representative to the Scientific Exhibit, Dr. Warren H. Cole, Chicago; representative on the Board of Plastic Surgery, Dr. William S. Kiskadden, Los Angeles; representative on the Board of Surgery, Dr. Warfield M. Firor, Baltimore, appointed to succeed Dr. Fred W. Rankin, Lexington, Ky., and Dr. J. Steward Rodman, Philadelphia, reappointed to the board; representative of the Board of Neurologic Surgery, Dr. Claude C. Coleman, Richmond, Va.; executive committee, Drs. Frederick Coller, Ann Arbor, Mich.; Daniel C. Elkin, Atlanta, Ga., and Alton Ochsner, New Orleans.

Dr. Daniel C. Elkin, Atlanta, Ga., read the chairman's address, entitled "Exposure of Blood Vessels."

Drs. Francis D. Moore, William P. Chapman, Chester M. Jones and Milford D. Schulz, Boston, presented a paper on "Transdiaphragmatic Vagus Resection in Peptic Ulcer: Physiologic Effects and Early Results." Discussed by Drs. Leland S. McKittrick, Boston; William D. Andrus, New York, and L. L. Dewey Tuttle, Houston, Texas.

Dr. Richard B. Cattell, Boston, read a paper on "Benign Strictures of the Bile Ducts." Discussed by Drs. H. Glenn Bell, San Francisco, and Frank H. Lahey, Boston.

Dr. Everett I. Evans, Richmond, Va., read a paper on "The Early Recognition and Management of Intestinal Strangulation." Discussed by Dr. Leland S. McKittrick, Boston.

Drs. Harry E. Bacon and Lowrain E. McCrea, Philadelphia, presented a paper on "Abdominoperineal Proctosigmoidectomy for Rectal Cancer and the Management of Associated Vesical Dysfunction." Discussed by Drs. Curtice Rosser, Dallas, Texas, and Roger W. Barnes, Los Angeles.

Dr. Paul C. Blaisdell, Pasadena, Calif. read a paper on "Unique Behavior of the Healing Open Pilonidal Wound and Clinical Complications." Discussed by Drs. Curtice Rosser, Dallas, Texas, and Claude C. Tucker, Wichita, Kan.

FRIDAY, JULY 5—MORNING

The following papers were read as a symposium on "Wound Management":

Dr. John D. Stewart, Buffalo: "Wound Shock."

Robert Rustigian and Arthur Cipriani, Sanitary Corps, U. S. Army: "Bacteriology of Open Wounds."

Dr. Howard E. Snyder, Winfield, Kan.: "Blood Replacement in Wound Management."

Dr. Champ Lyons, New Orleans: "The Role of Chemotherapy in Wound Management."

Dr. Francis B. Berry, New York: "Surgical Principles in Wound Management."

These five papers were discussed by Drs. Hall G. Holder, San Diego, Calif.; Emile Coleman, San Francisco; Everett I. Evans, Richmond, Va.; Col. Michael E. DeBakey, M. C., A. U. S., and Frederick M. Allen, New York.

Drs. Ralph Adams and Bernard J. Ficarra, Boston, presented a paper entitled "An Appraisal of Surgery in the Treatment of Bronchiectasis." Discussed by Dr. Lyman A. Brewer, Los Angeles.

Drs. Lloyd Nolan, Fairfield, Ala., and Thomas M. Joyce, Portland, Ore., were appointed by the chairman to the executive committee to serve during the temporary absence of Drs. Arthur W. Allen, Boston, and Frederick A. Coller, Ann Arbor, Mich.

SECTION ON OBSTETRICS AND GYNECOLOGY

WEDNESDAY, JULY 3—AFTERNOON

The meeting was called to order by the chairman, Dr. Philip F. Williams, Philadelphia, at 2 o'clock.

The chairman announced the appointment of Drs. F. L. Adair, Chesterton, Ind., and I. C. Rubin, New York, to serve on the executive committee in the temporary absence of Drs. Walter T. Danreuther, New York, and Louis E. Phaneuf, Boston.

Drs. Lester D. Odell and John H. Randall, Iowa City, presented a paper on "Prolonged Labor, with Special Reference to Postpartum Hemorrhage." Discussed by Drs. Donald A. Dallas, San Francisco; Pendleton S. Tompkins, San Francisco, and Jacob L. Bubis, Cleveland.

Dr. Frank E. Whitacre, Memphis, Tenn., read a paper entitled "Contribution to the Study of Eclampsia." Discussed by Drs. Robert N. Rutherford, Seattle, and Ralph Luikart, Omaha.

Dr. James M. Siever, San Antonio, Texas, read a paper on "Clinical Application of Caudal Anesthesia in Obstetrics." Discussed by Drs. Robert A. Hingson, Memphis, Tenn.; Alice F. Maxwell, San Francisco, and Willis E. Brown, Iowa City.

Drs. Ralph A. Reis and Edwin J. DeCosta, Chicago, presented a paper on "Cesarean Hysterectomy." Discussed by Drs. Donald G. Tollefson, Los Angeles, and Emil J. Krahulik, Los Angeles.

Dr. Charles Newberger, Chicago, read a paper entitled "A Statistical Study of the Obstetric Activities in Illinois Hospitals During 1945." Discussed by Drs. Robert D. Mussey, Rochester, Minn., and A. E. Kanter, Chicago.

THURSDAY, JULY 4—AFTERNOON

The Committee on Women in Industry was continued. The following officers were elected: chairman, Dr. Alice F. Maxwell, San Francisco; vice chairman, Dr. Robert J. Crossen, St. Louis; secretary, Dr. William F. Mengert, Dallas, Texas; delegate, Dr. Jean Paul Pratt, Detroit; alternate, Dr. Harvey B. Matthews, Brooklyn; executive committee, Drs. Louis E. Phaneuf, Boston; Philip F. Williams, Philadelphia, and Alice F. Maxwell, San Francisco; representatives on the board of governors of the American College of Surgeons, Drs. Emil Novak, Baltimore; Thomas K. Brown, St. Louis, and Edward L. King, New Orleans; representatives to the American Congress on Maternal Welfare, Drs. Robert D. Mussey, Rochester, Minn.; William Benbow Thompson, Los Angeles, and Oren Moore, Charlotte, N. C.; representatives to the American Board of Obstetrics and Gynecology, Drs. Francis Bayard Carter, Durham, N. C.; Louis E. Phaneuf, Boston, and Ludwig A. Emge, San Francisco; representative to the Scientific Exhibit, Dr. Frederick H. Falls, Chicago.

Dr. Philip F. Williams, Philadelphia, read the chairman's address, entitled "Maternal Welfare and the Negro."

Dr. I. C. Rubin, New York, read a paper on "Contraception Masking Potential Infertility and Sterility, with Special Reference to Tubal and Seminal Factors." Discussed by Drs. Sheldon A. Payne, Los Angeles; Pendleton Tompkins, San Francisco, and Eric M. Matsner, New York.

Dr. William F. Guerriero, Dallas, Texas, read a paper on "Infectious Granulomatous Lesions of the Cervix." Discussed by Dr. William B. McGee, San Diego, Calif.

Dr. Joe Vincent Meigs, Boston, read a paper on "The Value of the Vaginal Smear in the Diagnosis of Cancer of the Uterus: Some Practical Applications." Discussed by Drs. Herbert F. Traut, San Francisco, and Warren C. Hunter, Portland, Ore.

Dr. Robert J. Crossen, St. Louis, read a paper on "Five Hundred Cases of Uterine Myoma Selected for Radiation Treatment: Critical Analysis of Results Showing Indications and Limitations." Discussed by Drs. William Costolow, Los Angeles; Charles E. Galloway, Evanston, Ill.; Clyde K. Emery, Los Angeles; Jacob L. Bubis, Cleveland, and Ralph Luikart, Omaha.

On motion made by Dr. Robert D. Mussey and seconded by several members, it was unanimously voted that, the section having expressed a desire to join the National Federation of Obstetrical and Gynecologic Societies, contingent on approval of the American Medical Association, the then chairman of the section be empowered to appoint a member and alternate to the board of governors of such national federation.

FRIDAY, JULY 5—MORNING

A joint meeting was held with the Section on General Practice of Medicine. The proceedings are reported in the minutes of that section.

SECTION ON OPHTHALMOLOGY

WEDNESDAY, JULY 3—MORNING

The meeting was called to order at 9:20 by the chairman, Dr. Frederick C. Cordes, San Francisco.

Dr. Frederick C. Cordes, San Francisco, read the chairman's address, entitled "Ophthalmology's Postwar Responsibilities and Opportunities."

Vice Admiral Ross T. McIntire (MC), U.S.N., the guest of honor, read a paper on "The Role of Ophthalmology in the Navy during Wartime."

Executive Session

On motion by Dr. Lawrence T. Post, St. Louis, seconded by Dr. Meyer Wiener, Coronado, Calif., it was voted that Sir Stewart Duke-Elder be made a member of the American Medical Association and that the delegate of the section be instructed to present his name before the House of Delegates.

The chairman, Dr. Frederick C. Cordes, San Francisco, expressed the regret of the executive committee that illness prevented the vice chairman, Dr. Grady E. Clay, Atlanta, Ga., from being present. On motion by Dr. Arthur J. Bedell, Albany, N. Y., seconded by Dr. Derrick Vail, Chicago, it was voted that the section send a message to Dr. Clay.

Scientific Session

Dr. Hedwig S. Kuhn, Hammond, Ind., read a paper on "Industrial Ophthalmology as of 1946." Discussed by Drs. Derrick Vail, Chicago; A. C. Dick, San Diego, Calif.; E. H. Cary, Dallas, Texas; and Hedwig S. Kuhn, Hammond, Ind.

Drs. William F. Hughes Jr. and William C. Owens, Baltimore, presented a paper on "Postoperative Complications of Cataract Operation." Discussed by Drs. M. Hayward Post, St. Louis; Frederick A. Davis, Madison, Wis.; Victor Clough Rambo, Mungeli, India; Walter B. Lancaster, Boston, and William F. Hughes Jr., Baltimore.

Dr. Kenneth C. Swan, Portland, Ore., read a paper on "Esotropia Following Occlusion." Discussed by Drs. Peter C. Kronfeld, Chicago; George N. Hosford, San Francisco; Joseph I. Pascal, New York, and Kenneth C. Swan, Portland, Ore.

THURSDAY, JULY 4—MORNING

Executive Session

The secretary, Dr. R. J. Masters, Indianapolis, read a communication from the Ophthalmological Society of Australia inviting representatives of the American Medical Association to attend its sixth annual general and scientific meeting at Melbourne on Oct. 23-26, 1946. It was voted that the secretary be instructed to acknowledge this letter with the thanks of the section.

Secretary Masters stated that the Committee on Visual Economics did not have a report to submit at present but was working on a new type of test chart, and that its final report on this work would probably be ready during the course of the coming year.

Dr. Walter B. Lancaster, Boston, gave the report of the Committee on Optics and Visual Physiology, in which he described the duties of the committee and stated that it had accepted very few devices. This report was accepted.

Dr. Frederick A. Davis, Madison, Wis., reported for the Committee on the Awarding of the Knapp Medal, stating that the committee did not recommend that the medal be awarded for any paper presented before the 1944 session of the section. This report was accepted.

Dr. Conrad Berens, New York, submitted the report of the Committee on the American Board of Ophthalmology, which was accepted.

There was no report from the Committee on the National Museum of Ophthalmology.

Dr. Derrick T. Vail, Chicago, submitted the report of the Committee on Scientific Exhibit, which was accepted. The chairman of the section, Dr. Frederick C. Cordes, San Francisco, stated that he felt that both the section and Dr. A. D. Ruedemann of the Cleveland Clinic Foundation should be congratulated in view of the fact that Dr. Ruedemann's exhibit had been awarded the Gold Medal by the Association.

Dr. Walter B. Lancaster, Boston, submitted the report of the Committee on the American Orthoptic Council, which was accepted.

Secretary Masters read the report submitted by Dr. Robert von der Heydt, Chicago, chairman of the Committee on the Museum of Ophthalmic History, which was accepted.

Secretary Masters read the report of the Advisory Committee to the Eye Health Committee of the Student Health Association as submitted by Dr. William L. Benedict, Rochester, Minn., which was accepted.

Dr. M. Hayward Post, St. Louis, stated that there was no report from the representative of the section to the board of governors of the College of Surgeons.

Dr. Thomas D. Allen, Chicago, submitted the report of the Committee on Industrial Ophthalmology, which was accepted.

Dr. Parker Heath, Detroit, submitted the report of the Committee on the Knapp Testimonial Fund, which was accepted with thanks.

Dr. Derrick T. Vail, Chicago, submitted the report of the Committee on the Relationship between Ophthalmologists, Opticians and Optometrists, which was accepted.

Dr. S. Judd Beach, Portland, Maine, submitted the following resolution, which was adopted:

WHEREAS, It is not contrary to the Principles of Medical Ethics as determined by the American Medical Association for members of the Association to disseminate information pertaining to matters of public health, such as cancer, diabetes and venereal disease, by lectures, demonstrations, radio talks, pamphlets and conferences or other means to nonmedical groups; and

WHEREAS, Ophthalmic subjects, such as vascular disease, glaucoma, retinal disorders and optic nerve disease, considered as potential causes of blindness are matters of grave importance to the public; and

WHEREAS, The prevention of blindness is one of the chief obligations of ophthalmologists; therefore be it

Resolved, That the Section on Ophthalmology of the American Medical Association declares that it is entirely within the definition of medical ethics for its members to engage in lectures, demonstrations, the preparation of pamphlets and other measures suitable for the dissemination of information designed to prevent blindness and directed to any nonmedical group.

Dr. Arthur J. Bedell, Albany, N. Y., submitted his report as delegate, in which he proposed "a vote of thanks and appreciation to Dr. Olin West and the wish that his life may be long, restful and full of pleasant thoughts of things well done." This report was accepted with thanks, and a vote of thanks was tendered to Dr. West.

Dr. Lawrence T. Post, St. Louis, submitted the report of the executive committee containing the following nominations and recommendations:

1. Committee on Visual Economics: Albert M. Snell, chairman; Alfred Cowan, Ralph Rychener.

2. American Committee (Joint) on Optics and Visual Physiology: Lawrence T. Post, Thomas D. Allen, Walter B. Lancaster.

3. Committee on Awarding the Knapp Medal: A. B. Reese, chairman (three years), Theodore L. Terry (two years), M. Hayward Post (one year).

4. Committee on American Board of Ophthalmology: C. S. O'Brien.

5. Committee on National Museum of Ophthalmic Pathology (Joint): Reappoint Jonas S. Friedenwald.

6. Committee on Scientific Exhibit: Reappoint Georgiana Theobald, Derrick T. Vail and A. B. Reese.

7. Committee on Museum of Ophthalmic History: Reappoint Robert von der Heydt, chairman, and Burton Chance. Appoint Hans Barkan to succeed J. W. Jervey, deceased.

8. Committee on American Orthoptic Council: Truman L. Boyes, Lawrence T. Post, George S. Campion.

9. Advisory Committee to the Eye Health Committee of the Student Health Association: William L. Benedict.

10. Representative of Section to Board of Governors of the College of Surgeons: Reappoint M. Hayward Post.

11. Committee on Industrial Ophthalmology: Reappoint Derrick T. Vail, chairman, Hedwig S. Kuhn and Glen H. Harrison.

12. Knapp Testimonial Fund Committee: Reappoint Conrad Berens, Lawrence T. Post.

13. That the Committee on the Study of Optical Dispensing and the Committee on the Relationship between Ophthalmologists, Opticians and Optometrists be discontinued and that the Committee on Public Relations be continued with an enlarged roster as follows: Derrick T. Vail, chairman; Parker Heath, Walter B. Lancaster, A. Ray Irvine, Frederick A. Davis, Frederick C. Cordes, Brittain F. Payne, S. Judd Beach, Alan C. Woods, Lawrence T. Post.

14. That the Committee on Ophthalmic Literature be discontinued.

The report was accepted, together with all the recommendations contained therein. The Committe on Awarding the Knapp Medal, as recommended by the executive committee, was nominated and elected from the floor.

The following officers were elected: chairman, Dr. Derrick T. Vail, Chicago; vice chairman, Dr. Warren D. Horner, San Francisco; secretary, Dr. Robert J. Masters, Indianapolis; assistant secretary, Dr. Trygve Gundersen; delegate, Dr. Arthur J. Bedell, Albany, N. Y.; alternate, Dr. S. Judd Beach, Portland, Maine; executive committee, Dr. Conrad Berens, New York; Dr. Frederick C. Cordes, San Francisco; Dr. J. Mackenzie Brown, Los Angeles.

Scientific Session

Lieut. Col. Phillips Thygeson, M. C., A. U. S., read a paper on "Clinical Signs of Diagnostic Importance in Conjunctivitis." Discussed by Drs. James H. Allen, Iowa City; Trygve Gundersen, Boston; I. S. Tassman, Philadelphia, and Phillips Thygeson, San Jose, Calif.

Dr. Otto Barkan, San Francisco, read a paper on "Goniotomy for Congenital Glaucoma: Urgent Need for Early Diagnosis and Operation." Discussed by Drs. Meyer Wiener, Coronado, Calif.; Dohrmann K. Pischel, San Francisco; Thomas D. Allen, Chicago; Edward B. Shaw, San Francisco; Peter C. Kronfeld, Chicago, and Otto Barkan, San Francisco.

Drs. Paul A. Chandler and Carl C. Johnson, Boston, presented a paper on "A Neglected Cause of Secondary Glaucoma in Eyes in Which the Lens is Absent or Subluxated." Discussed by Drs. John H. Dunnington, New York, and Paul A. Chandler, Boston.

Dr. Harold F. Falls, Ann Arbor, Mich., read a paper on "Two Families Supplying Evidence for the Inheritance of Retinoblastoma." Discussed by Drs. Theodore L. Terry, Boston; C. Wilbur Rucker, Rochester, Minn., and Harold F. Falls, Ann Arbor, Mich.

In the demonstration of new instruments the following items were presented:

1. Otto Barkan, San Francisco: A New Hammer Lamp.

2. J. Guy Jones, Dallas, Texas: Tenaculum Forceps for Use in Enucleation.

3. Arthur J. Bedell, Albany, N. Y.: Set of Kodachrome Fundus Slides.

4. S. Judd Beach, Portland, Maine: A Red Glass Muscle Tester.

5. Conrad Berens, New York: A Plastic Prism Bar.

FRIDAY, JULY 5—MORNING

A joint meeting was held with the Section on Nervous and Mental Diseases.

The chairman of the Section on Nervous and Mental Diseases, Dr. Percival Bailey, Chicago, read the chairman's address, entitled "The Practice of Neurology in the U. S. A."

Drs. George Wilson and Charles Rupp Jr., Philadelphia, presented a paper on "Present Trends in the Practice of Neurology."

These two papers were discussed by Drs. J. M. Nielsen, Los Angeles; John B. Doyle, Los Angeles; Walter F. Schaller, San Francisco; Roland P. Mackay, Chicago; Walter H. MacDougall, Oswego, Ore., and Henry R. Viets, Boston.

Dr. David O. Harrington, San Francisco, read a paper on "Ocular Manifestations of Psychosomatic Disorders." Discussed by Drs. George Stuart Campion, San Francisco; Meyer A. Zeligs, Oakland, Calif.; Arthur J. Bedell, Albany, N. Y.; Walter S. Atkinson, Watertown, N. Y., and David O. Harrington, San Francisco.

Dr. John Martin, Chicago, read a paper on "The Surgical Problem of Intracranial Aneurysm and Allied Vascular Lesions." Discussed by Drs. John E. Raaf, Portland, Ore.; Hale A. Haven, Seattle; Cullen Ward Irish, Los Angeles; Arthur J. Bedell, Albany, N. Y., and John Martin, Chicago.

Dr. Donald J. Lyle, Cincinnati, read a paper on "Visual Field Changes Confirmed by Pathologic Diagnosis." Discussed by Major John S. McGavic, M. C., A. U. S., and Drs. P. J. Leinfelder, Iowa City, and Donald J. Lyle, Cincinnati.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

WEDNESDAY, JULY 3—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Louis H. Clerf, Philadelphia.

Dr. Carl H. McCaskey, Indianapolis, read a paper on "Treatment of Neck Infections." Discussed by Drs. J. M. Brown, Los Angeles; Rea E. Ashley, San Francisco; Thomas E. Carmody, Denver; Burt R. Shurly, Detroit; Irving W. Voorhees, New York; B. M. Kully, Los Angeles, and Carl H. McCaskey, Indianapolis.

On motion by Dr. Thomas E. Carmody, Denver, seconded by Dr. Burt R. Shurly, Detroit, it was voted that Dr. Albert D. Alexander, Arlington, Va., be nominated for associate fellowship in the American Medical Association.

Dr. Joseph D. Kelly, New York, read a paper on "Surgery of the Larynx in Bilateral Abduction Muscular Paralysis." Discussed by Drs. Simon Jesberg, Los Angeles; Lewis F. Morrison, San Francisco; Brien T. King, Seattle; Lorenz Ruddy, Sacramento, Calif., and Joseph D. Kelly, New York.

Dr. J. M. Robison, Houston, Texas, read a paper on "Pressure Treatment of Allergic Sinusitis." Discussed by Drs. Homer E. Prince, Houston, Texas; Oscar Swineford Jr., Charlottesville, Va., and J. M. Robison, Houston, Texas.

Dr. Henry R. Viets, Boston, read a paper on "Diagnosis of Myasthenia Gravis in Patients with Dysphagia." Discussed by Drs. Henry W. Newman, San Francisco; Victor Goodhill, Los Angeles, and Henry R. Viets, Boston.

Dr. A. M. Olsen, Rochester, Minn., read a paper on "Nebulization Therapy in Bronchiectasis: The Use of Penicillin and Streptomycin Aerosols." Discussed by Drs. Alvan L. Barach, New York; Porter P. Vinson, Richmond, Va.; Maurice S. Segal, Boston, and A. M. Olsen, Rochester, Minn.

THURSDAY, JULY 4—AFTERNOON

Executive Session

It was voted that the minutes of the last meeting, as circularized in THE JOURNAL, be approved.

There was no report from the Committee on Lye Legislation. The committee was continued, with Dr. Chevalier L. Jackson, Philadelphia, remaining as chairman.

There was also no report from the Committee on Industrial Health. The committee was continued with the exception that on the request of Dr. William E. Grove, Milwaukee, to be relieved of the office of chairman, Dr. Frank J. Novak, Chicago, was appointed chairman, the other members of the committee being Drs. Dean Lierle, Iowa City; Carlton Stewart Nash, Rochester, N. Y., and George E. Shambaugh Jr., Chicago.

Dr. John Shea, Memphis, Tenn., was appointed as representative to the American Board of Otolaryngology.

Dr. Claude C. Cody, Houston, Texas, presented the report of the executive committee in the absence of the chairman of the committee, Dr. Gordon F. Harkness, Davenport, Iowa.

The following officers were elected: chairman, Dr. J. Mackenzie Brown, Los Angeles; vice chairman, Dr. Carl H. McCaskey, Indianapolis; secretary, Dr. Fletcher D. Woodward, Charlottesville, Va.; delegate, Dr. Burt R. Shurly, Detroit; alternate, Dr. Gordon F. Harkness, Davenport, Iowa; executive committee, Dr. Claude C. Cody, Houston, Texas; Dr. Louis H. Clerf, Philadelphia; Dr. J. Mackenzie Brown, Los Angeles.

Scientific Session

Dr. Louis H. Clerf, Philadelphia, read the chairman's address, entitled "Keratosis of the Larynx."

Dr. James Barrett Brown, St. Louis, and Col. Bradford Cannon, Boston, presented a paper on "Composite Free Grafts of Skin and Cartilage from the Ear." Discussed by Drs. William S. Kiskadden, Los Angeles; Walter B. Macomber, Albany, N. Y., and Col. Bradford Cannon, Boston.

Dr. Julius A. Weber, Seattle, read a paper on "Fenestration Operation for Osteosclerotic Deafness." Discussed by Drs. Howard P. House, Los Angeles; George E. Shambaugh Jr., Chicago; Sylvan S. Goldberg, Los Angeles, and Julius A. Weber, Seattle.

Dr. Leland G. Hunnicutt, Pasadena, Calif., read a paper on "Modern Treatment of Chronic Sinusitis." Discussed by Drs. Lewis F. Morrison and Robert C. McNaught, San Francisco, and Leland G. Hunnicutt, Pasadena, Calif.

FRIDAY, JULY 5—MORNING

A joint meeting was held with the Section on Radiology. The proceedings are given in the minutes of that section.

SECTION ON PEDIATRICS

WEDNESDAY, JULY 3—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. John Aikman, Rochester, N. Y.

Dr. Milton B. Cohen, Cleveland, read a paper on "The Immunology of Allergy as Illustrated by Hay Fever." Discussed by Drs. George B. Logan, Rochester, Minn., and George Piness, Los Angeles.

Dr. Jerome Glaser, Rochester, N. Y., read a paper on "Symptomatic Treatment of Bronchial Asthma in Infancy and Childhood." Discussed by Drs. Vernon W. Spickard, Seattle; William C. Deamer, San Francisco, and George Piness, Los Angeles.

Dr. Arild E. Hansen, Galveston, Texas, read a paper on "Eczema and the Essential Fatty Acids." Discussed by Drs. Alton Goldbloom, Montreal, and Albert V. Stoesser, Minneapolis.

Dr. John A. Toomey, Cleveland, read a paper on "Overdosage with Vitamin A." Discussed by Dr. Edward B. Shaw, San Francisco.

Dr. Clifford D. Sweet, Oakland, Calif., read a paper on "Enuresis: A Psychologic Problem of Childhood." Discussed by Dr. Ernst Wolff, San Francisco.

Dr. John P. Hubbard, Washington, D. C., read a paper on "The Present Status of the Study of Child Health Services." Discussed by Drs. George M. Wheatly, New York; Crawford Bost, San Francisco, and H. E. Thelander, San Francisco.

THURSDAY, JULY 4—MORNING

Executive Session

The following officers were elected: chairman, Gilbert J. Levy, Memphis, Tenn.; vice chairman, Charles A. Weymuller, Brooklyn; secretary, Margaret Mary Nicholson, Washington, D. C.; executive committee, Hugh L. Dwyer, Kansas City, Mo.; John Aikman, Rochester, N. Y.; Gilbert J. Levy, Memphis, Tenn.; delegate, William Weston, Columbia, S. C.; alternate, Ralph Tyson, Philadelphia; representative to Scientific Exhibit, Albert V. Stoesser, Minneapolis.

It was decided, on motion duly made and carried, that $500 be appropriated from the Jacoby Fund to further the cause of pediatrics in European universities.

Scientific Section

Drs. Paul A. Reichle and Walter E. Ward, Los Angeles, E. G. Knouf, South Pasadena, Calif., A. G. Bower, Glendale, Calif., and Paul M. Hamilton, San Marino, Calif., presented a paper on "Treatment of Typhoid with Specific Bacteriophage." Discussed by Dr. William A. Reilly, San Francisco, and Wilton L. Halverson, San Francisco.

Dr. Charles A. Weymuller, Brooklyn, read a paper on "Measures for Protection of Newborn Infants." Discussed by Dr. Francis Scott Smyth, San Francisco.

Drs. Joseph Yampolsky and Albert S. Heyman, Atlanta, Ga., presented a paper on "Evaluation of the Use of Penicillin in the Treatment of Syphilis in Children." Discussed by Dr. Oscar Reiss, Los Angeles.

Dr. John J. Miller Jr., San Francisco, read a paper on "Immunization Procedures in Pediatrics." Discussed by Drs. H. E. Thelander, San Francisco; Alfred E. Fischer, New York; John A. Toomey, Cleveland, and Ernst Wolff, San Francisco.

Dr. William G. Lennox, Boston, read a paper on "Tridione in the Treatment of Epilepsy." Discussed by Drs. M. A. Perlstein, Chicago, and Richard K. Richards, North Chicago, Ill.

Dr. Amos Christie and J. C. Peterson, Nashville, Tenn. presented a paper on "Benign Histoplasmosis and Pulmonary Calcification." Discussed by Drs. Charles E. Smith, San Francisco, and David T. Smith, Durham, N. C.

FRIDAY, JULY 5—MORNING

Drs. Karl F. Meyer and B. Eddie, San Francisco, presented a paper on "The Knowledge of Human Virus Infections of Animal Origin." Discussed by Drs. Robert F. Korns, Albany, N. Y., and Gilbert J. Levy, Memphis, Tenn.

The following papers were read as a symposium on "Anemia in Infancy and Childhood":

Dr. Wolf W. Zuelzer, Detroit: "Pathogenesis."

Dr. Carl H. Smith, New York: "Diagnosis."

Dr. James M. Baty, Brookline, Mass.: "Classification."

Dr. Henry G. Poncher, Chicago: "Treatment."

These four papers were discussed by Drs. M. M. Wintrobe, Salt Lake City, and Carl V. Moore, St. Louis.

(To be continued)

Washington Letter

(From a Special Correspondent)

July 22, 1946.

House Committee Approves 100 Million Dollar Cancer Program

The House Foreign Affairs Committee has approved the 100 million dollar cancer research program sponsored by Representative Neely, Democrat of West Virginia. The bill has already been approved by the Senate Foreign Relations Committee. The measure authorizes the President to use the money to mobilize the world's doctors and scientists in "a supreme endeavor to discover means of curing and preventing cancer." The House committee added an amendment stipulating that activities will be coordinated through an independent group to be appointed by the President.

Draft Regulations Feared as Menace to College Faculties

Dr. Francis Brown, director of the higher education division of the American Council on Education, did not specify medical schools, but he said that tightened draft regulations may strip universities and colleges of younger faculty members at a time when they were swamped with veteran students. He was in Washington to take up the question of exemptions with Selective Service. The new rules eliminate occupational deferment for men aged 19 through 29 unless they are farmers or in "indispensable and irreplaceable" work. Dr. Brown says that the regulations present a serious problem, especially to "young science people, who may be yanked into the armed forces at a time when they can't be replaced."

Cabinet Status Expected for Proposed Department of Welfare

Congress has approved two of President Truman's reorganization plans, including that planned to improve the nation's health and welfare through consolidation of federal agencies. Mr. Truman is reported to be in favor of a Department of Welfare with cabinet status. Since passage of two of his three proposed plans, the Children's Bureau has already been transferred from the Labor Department to the Federal Security Agency. Activities remaining with the Children's Bureau under the Federal Security Agency include its basic function to investigate and report on conditions affecting the well-being of children. The bureau will continue programs for maternal and child health. Watson Miller is the federal security administrator.

Returning Soldiers Bring Back New Type of Diphtheria

Army medical officials reveal that a rare type of diphtheria has been brought back to the United States by soldiers returning from overseas with skin diseases, creating a new problem of disease control in army hospitals. The diphtheria type differs from the common throat infection in that the germ enters the skin through a wound or sore and attacks the nose, throat and ears as well as the skin. Officials report that virulent diphtheria germs were found in 5 per cent of the patients sent to an army hospital because of skin infections acquired in tropical areas. Careful examination of incoming patients, isolation and quarantine of diphtheria patients, and Schick tests for all patients and workers are recommended, especially in hospitals caring for patients with skin diseases.

Bill Would Establish Sanitary Water Districts

The Surgeon General of the Public Health Service would be empowered to establish sanitary water districts and make sanitary regulations for those areas under the $100,000,000 bill which seeks elimination of pollution in the nation's rivers. The bill was favorably reported April 13 by the House Rivers and Harbors Committee, and similar action by the House is expected soon. The federal security administrator would be authorized to make grants-in-aid to states for construction of treatment works to prevent the discharge of inadequately treated or untreated sewage or other waste into interstate waters. The committee reported that water pollution is an emergency matter menacing the health of millions.

Wartime Bill to Fight Prostitution Killed by House

The House of Representatives has tentatively killed a bill that sought to continue wartime federal assistance to the states to combat prostitution and sex delinquency. Proponents argue that federal aid was still needed, Representative Bolton, Republican of Ohio, stating that "war conditions are not over and postwar demoralization" still presents a problem. Representative Smith, Ohio Republican, opposed the measure, charging that it would "set up an agency to snoop into the sexual lives of our people." He contended that it would infringe state rights. The bill was killed on a nonrecord vote of 67 to 53.

Government Permits ex-Enemy Scientists to Become Citizens

The government will soon permit German and Austrian scientists to bring their families to this country and become United States citizens. The program will be administered by a special division in the Department of Commerce, with the army screening scientists in Europe to weed out undesirables. Final clearance must come from the Department of Justice before they can enter the country to become citizens by fulfilling legal requirements.

New Hospitals for the District of Columbia

The House District of Columbia committee has approved and sent on to the House of Representatives for approval the bill which would give the capital city 35 million dollars' worth of new private hospitals in five years at a cost of $10,500,000 to District taxpayers. An amendment would require the three private hospitals Emergency, Garfield and Episcopal to merge in the proposed Hospital Center.

Practical Nurses Oppose Graduate Nurses as Licensing Authority

The sole basis of objection by the Association for Undergraduate Practical Nurses of the District of Columbia to the proposed licensing law is the fact that the bill in its present form would establish a board composed of registered nurses as the sole licensing authority, and the practical nurses want representation on the board.

Navy Research Institute Studies Flukeworm

The Naval Medical Research Institute of Bethesda, Md., is studying flukeworms, which cause all three types of schistosomiasis, the tropical disease which afflicted 1,672 American servicemen in the Philippines. There is no danger of civilian infection, but military medical research is being conducted to head off a continuing threat to the health of occupying forces.

New Mental Health Institute Seeks Better Treatment

The new $7,500,000 mental health research program authorized by the government is expected to improve treatment for the estimated 8,000,000 Americans who are mentally ill. The program is to be conducted in a research institute at Bethesda, Md., equipped for research in all phases of mental health.

Drive for Hospital Center and Slum Clearance

Representative McMillan of the House District Committee reports that a final drive has been launched for enactment of legislation for a $20 million hospital center and slum clearance. Both bills were passed long ago by the Senate.

Coming Medical Meetings

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Hot Springs, Va., Sept. 5-7. Dr. James R. Bloss, 418 Eleventh St., Huntington 1, W. Va., Secretary.

American College of Surgeons, Cleveland, Dec. 16-20. Dr. Dallas B. Phemister, 40 E. Erie St., Chicago 11, Secretary.

American Congress of Physical Medicine, New York, Sept. 4-7. Dr. Richard Kovacs, 2 East 88th St., New York 28, Secretary.

Colorado State Medical Society, Estes Park, Sept. 11-14. Mr. Harvey T. Sethman, 1612 Tremont Place, Denver 2, Executive Secretary.

National Medical Association, Louisville, Ky., Aug. 20-23. Dr. John T. Givens, 1108 Church St., Norfolk 10, Va., Secretary.

Utah State Medical Association, Salt Lake City, Aug. 29-31. Dr. D. G. Edmunds, 610 McIntyre Bldg., Salt Lake City, Secretary.

Washington State Medical Association, Spokane, Aug. 19-21. Dr. A. J. Bowles, 218 Cobb Bldg., Seattle, Secretary.

Official Notes

MOTION PICTURES OF FAMOUS PHYSICIANS

As a special feature of the one hundredth anniversary session in Atlantic City next year a 16 mm. motion picture of famous physicians and surgeons of the past is in preparation. The cooperation of our members is solicited in connection with this project. It will appreciated if those having motion pictures or information regarding existing footage of such men at work or at play will write to the Committee on Medical Motion Pictures, American Medical Association, Chicago.

Information should include the length of film, color or black and white, and the circumstances under which the pictures were taken.

All original films submitted in connection with this project will be duplicated and returned to the owner.

Medical Legislation

MEDICAL BILLS IN CONGRESS

Health of Mothers and Children

Senator Pepper, for himself and Senator Taft, has introduced S. J. Res. 177 proposing to amend title V of the Social Security Act to provide for increased grants to states for maternal and child health services from $5,820,000 to $15,000,000, for services for crippled children from $3,870,000 to $10,000,000, and for child welfare services from $1,510,000 to $5,000,000. The measure is pending in the Senate Committee on Finance.

Hill-Burton Hospital Construction Bill

The House Committee on Interstate and Foreign Commerce has reported S. 191 with amendments proposing to enact a "Hospital Survey and Construction Act." The reported bill reduces the federal appropriation available for surveys and planning from $5,000,000 to $3,000,000 and provides that the federal contribution shall be 33⅓ per cent instead of 50 per cent as proposed in the bill as passed by the Senate. The functions of the Federal Hospital Council were not changed by the House committee.

National Science Foundation

The bill to establish a National Science Foundation to promote the progress of science and the useful arts, to secure the national defense and to advance the national health and welfare, S. 1850, has passed the Senate in substantially the same form in which it was reported by the Senate Committee on Military Affairs. One change was effected in the bill by an amendment submitted from the floor of the Senate which eliminates from the measure (1) a proposed Division of Social Sciences in the Foundation and (2) any authority which was devolved on the Foundation to sponsor research in the social sciences.

Cash Sickness Benefits

The bill introduced by Representative Crosser, Ohio, proposing to amend the Railroad Retirement Acts, the Railroad Unemployment Insurance Act and subchapter B of chapter 9 of the Internal Revenue Code, H. R. 1362, has passed the House and has been favorably reported to the Senate. This bill, among other things, provides cash sickness and maternity benefits for railroad employees.

Reorganization Plan No. 2

The President's Reorganization Plan No. 2, transferring from the Labor Department to the Federal Security Agency functions concerning child welfare, crippled children, child and maternal health, and research in problems of child life, became effective July 16 after the Senate had rejected H. Con. Res. 151 proposing that the Congress disapprove the plan.

Health Programs for Government Employees

Senator Murdock, Utah, has introduced S. 2421 to provide for health programs for government employees to be limited to (1) treatments of on-the-job illness and dental conditions requiring emergency attention, (2) preemployment and other examinations, (3) referral of employees to private physicians and dentists and (4) preventive programs relating to health. Such health services will be provided by the heads of departments and agencies only after consultation with the United States Public Health Service and consideration of its recommendations and will be established only in localities where there are a sufficient number of federal employees to warrant the provision of such services.

Cancer Research

The Senate Committee on Foreign Relations and the House Committee on Foreign Affairs have approved pending legislation authorizing expenditure of $100,000,000 to mobilize scientists in cancer research, S. 1875 and H. R. 4502. These bills must still be acted on by the Senate and the House.

Hospital Center in the District of Columbia

The House Committee on the District of Columbia has reported with an amendment S. 223 to provide for the establishment of a modern, adequate and efficient hospital center in the District of Columbia.

Miscellaneous

The President has signed H. R. 4512 to amend the Public Health Service Act to provide for research relating to psychiatric disorders and to aid in the development of more effective methods of prevention, diagnosis and treatment of such disorders.

H. R. 5234, proposing to authorize the Federal Security Administrator to assist the states in measures to prevent prostitution, was favorably reported by the House Committee on the Judiciary but was rejected by the House of Representatives.

S. 2183 has been favorably reported by the Senate Committee on Civil Service to authorize the heads of executive departments and independent establishments of the federal government to grant scientific, technical and professional employees short leaves of absence for advanced research and study.

The Senate Committee on Naval Affairs has reported S. 2401 with recommendation that it pass authorizing the President to appoint 250 acting assistant surgeons for temporary service in the Navy. A House companion bill, H. R. 6992, has been favorably reported by the House Committee on Naval Affairs.

The Senate has passed S. 178 to amend the United States Employees' Compensation Act so as to authorize chiropractors to treat the beneficiaries of the act.

Representative Pfeifer, New York, has introduced H. R. 6922 to establish an executive department to be known as the Department of Health and to transfer to that department certain functions in the field of health now exercised by various agencies of the government. The new department, it is proposed, will be authorized, among other things, to conduct research, experiments and surveys, formulate and foster plans, and compile and disseminate information relating to health and sanitation.

STATE LEGISLATION

Missouri

Bills Introduced.—H. 459 proposes to provide for the construction and equipping of county hospitals and health centers and proposes further that any such county hospitals or health centers constructed under the provisions of this proposal should grant equal rights therein to each school of healing licensed by the state of Missouri.

Bills Enacted.—H. 622 was approved July 3, 1946. It authorizes certain state hospitals to give treatments or injections of serum to citizens of the state who may be suffering from nervous or mental diseases but who do not need hospitalization.

Ohio

Bills Enacted.—H. 491-XX was approved July 10, 1946. To amend the law relating to pharmacy, it sets forth certain eligibility requirements for applicants to practice pharmacy and then provides that the requirement of one year's experience in a retail drug store under the personal supervision of a registered pharmacist shall be waived in the case of a member of the armed forces who served in any capacity in any branch of the service prior to July 1, 1945, provided such applicant for examination was duly matriculated in a recognized school or college of pharmacy or department of pharmacy of a university prior to Oct. 1, 1941.

THE WAGNER-MURRAY-DINGELL BILL

Hearings on S. 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings.*—ED.)

(Continued from page 925)

United States Senate, Committee on Education and Labor.

MAY 28, 1946

HONORABLE JAMES E. MURRAY Presiding

PRESENT: Senators Murray, Morse and Donnell; also Senator Guy Cordon

(At the opening of the session Senators Morse, Murray and Donnell complimented one another on their fairness and their attendance at the hearings.)

Statement of Dr. S. A. Cooney of the Montana State Medical Association

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DR. COONEY: The Montana State Medical Association by a unanimous vote has instructed me to oppose the passage of Senate bill 1606 as it infringes on the rights of a profession that has always rendered its services to all people without regard to their ability to pay. They are unalterably opposed to this bill. I personally am in accord with this statement. High cost of medical care, when it is beyond the means of the low and moderate income group, is certainly not a commendable thing. However, in fairness to the medical profession I wish to state that this burden is not the result of any increase in medical fees. The medical fee schedule in my community when I first started to practice medicine was $3 for a house visit and $2 for an office call. Major surgery, appendectomy and so forth was $150. Today the same medical fee schedule prevails. The hospital ward rate at this time was $1 a day with no cover charge added, and the operating room was $5 and anesthetic $5. Today the ward rate is $5, with $4 laboratory charge on admission. The operating room fee is $10, the anesthetic $10 to $15. Other fees and costs have increased, but the doctor's fee has remained the same. In the course of testimony before this committee the doctor has been slandered, the entire profession belittled. They have been placed on the defensive. This is unfair, for the doctors as a whole have given of their time, energy, skill and money to this nation without reservation. True, you will find renegades among the medical profession, but that is true of any profession or of any class of society.

(Dr. Cooney praised the medical profession for its stand.)

Under any proposed legislation there will be no means of compelling the medical profession to render services. If the physician refuses to serve, the free choice of physician will not be possible. Doctors would never strike against the people—they never have and never will. They, above all others, perhaps are closest to the average man and woman in this country. Under the present system of medical practice in Montana, maternal mortality is practically the lowest in the United States and this care is provided by the country doctors I have been telling you about who enjoy a free and unrestricted professional relationship with Montana citizens. Men revolt when they are compelled to do something which in conscience they believe they cannot do. I am convinced, based on my forty years of general practice—you may call it country practice if you like—that our people are opposed to this type of legislation.

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I plead with you, do not burden the doctor with bales of reports and do not stigmatize him as a contract doctor, for in so doing you make of him an impersonal machine, a servant of the state. You cripple his efficiency and remove the personal and loving care which he has given to these millions of people. And lastly and probably more important, in the end you deprive the patient and the community of his usefulness. The physician has long been a real "spark plug" in a great majority of the communities of this nation. Do not take the "spark" out of the physician and leave only the "plug."

SENATOR DONNELL: Doctor, you stated that the Montana State Medical Association by unanimous vote has instructed you to oppose the passage of S. 1606. Would you tell us approximately when it was that that vote was cast? DR. COONEY: Yes, last summer at a meeting of our house of delegates. The war restriction prevented a statewide meeting, so we held our house of delegates meeting, and they were delegated and authorized by the local society to oppose this measure.

SENATOR DONNELL: Doctor, have you examined this bill with a view to determining whether or not in your judgment the provisions of the bill would, to quote your language, "distort or impair the personal relationship between the patient and the physician"? DR. COONEY: That is the belief of the Montana doctors.

SENATOR MORSE: Doctor, are you opposed to any reforms or health insurance plans whereby the patient takes out an insurance policy for himself and his family, under which policy the doctors of the community, or the doctors that join the plan, give those people health protection? DR. COONEY: I think the medical profession is favorable to that proposal. It is just insurance. It is insurance against sickness. And it is a prepaid medical plan, and, of course, as you know, they have the Blue Cross hospital protection.

SENATOR MORSE: Do you think that there are any differences in the problems that confront us and your profession too in supplying adequate medical attention to large masses of the people in our industrial centers as compared with the problems of the country doctor? DR. COONEY: Well, in your large centers you have your hospitals and your big clinical groups. In our communities, of course, distances are so great that the hospital care of a patient is often a difficult thing.

SENATOR MORSE: Do you think that there is a difference in the doctor-patient relationship in a large industrial center where you have a great many patients that go through the offices of the doctors and the relationship that exists on the country doctor patient relationship, where the doctor really is pretty much a part of the community life? DR. COONEY: Yes.

SENATOR MORSE: And participated in by the patients themselves? DR. COONEY: Well, the personal relationship, of course, is much closer in the smaller communities. The doctor is the friend of the family and the adviser. In larger communities, of course, you are just number so and so, you are just another patient.

SENATOR MORSE: I think it is a correct observation that that is the type of doctor-patient relation we get in the small communities of the West, for example? DR. COONEY: Yes.

SENATOR MORSE: In my own state. DR. COONEY: Yes.

SENATOR MORSE: As well as Montana. There is quite a different relationship from the relationship we get in large industrial areas, such as Detroit and New York and Cleveland? DR. COONEY: Yes.

SENATOR MORSE: And that the demand on the part of the patients themselves, as citizens, for some attention being given to their health problems by the government itself I think is much greater. DR. COONEY: Yes.

Statement of Dr. A. R. Foss, Montana State Medical Association

DR. FOSS: I live in Missoula, Mont. I am chief surgeon for the Northern Pacific Railroad. I am a certified specialist of the American Board of Internal Medicine. I am a member of the State Board of Medical Examiners, president of the Missoula Tuberculosis Association and president of the Missoula Board of Health. The membership of the Montana State Medical Association is in the neighborhood of 400. Out of these members 114 were in the military service during 1945. Four of them have given their lives for their country. Therefore I come from a sparsely settled state, but one with a large territory. It is rather difficult to get medical care in some of the smaller towns in our state, as the population is not great enough to keep a doctor satisfied with the income he could derive. In addition, with his education he would not live in

these small places where his family would not have any benefits such as good schools, churches and other advantages. However, the larger areas have hospitals and good doctors and the people who reside there do have very good medical attention. This is evidenced by the fact that Montana has been very near the lowest in maternal and infant mortality during the last few years. Last year Dr. R. F. Peterson, secretary of the Montana Medical Association, Dr. J. C. Shields, president, Dr. S. A. Cooney, president-elect, and Dr. J. H. Irwin, delegate to the American Medical Association, made a visit to every county medical association in the state. They have reported that during these visits they did not hear a single word in favor of S. 1606, but that everywhere they went the subject of discussion was against the bill. There are approximately 300 dentists, 300 pharmacists and 700 nurses in Montana who I believe it is safe to say are overwhelmingly opposed to the Wagner-Murray-Dingell bill. The dentists at their annual meeting in Butte a month ago voted unanimously to "oppose to the hilt" legislation in regard to S. 1606.

(Dr. Foss described the plan of the Northern Pacific Beneficial Association.)

We treat all employees of the Northern Pacific and Camus Prairie railroads for medical and surgical care up to six months and in cases where they have a chance to improve for any length of time. This service includes medicines, doctor's service, hospital, nursing and any care which the patient requires. Specialists are provided and patients are sent to orthopedists, brain surgeons or any type of specialist they may require. The cost of this service is 1 per cent of their monthly wages, but the maximum payment is only $1.75 per month. These patients also get glasses and a payment of $1.50 per day to the sanatorium for one year if they develop tuberculosis. The Northern Pacific Railway pays $60,000 per year to our organization to help maintain it. SENATOR MURRAY: That is in addition to the other amount? DR. FOSS: To the $1.75, yes. Our association has over $2,500,000 in assets. We have very reasonable charges for private patients—those who wish to come to our doctors and do not belong to the Northern Pacific Beneficial Association. In addition we give the dependent members of the employee of the Northern Pacific Beneficial Association a discount of 25 per cent on their bill. This organization has been functioning as such since 1881, long before I was born. I believe it is the oldest of that type in the country. We have over 20 full time doctors on our staff and 425 part time doctors scattered along the line. Many of these doctors are specialists in various fields.

SENATOR MURRAY: In the case of the dependent members of the employees you serve them on a fee basis? DR. FOSS: On a fee basis, yes.

SENATOR MURRAY: Giving them a 25 per cent discount? DR. FOSS: Yes.

SENATOR MURRAY: But the employees of the railroad, you serve those free? DR. FOSS: Free. They do not pay for anything. SENATOR MURRAY: Yes.

DR. FOSS: Under S. 1606 this association would be broken down and it could not function.

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An argument of the proponents of the bill is the present high cost of medical care. Better physicians do cost more and are worth more. They cost more to make and more to maintain. The expense of equipment for modern practice of medicine and keeping progress are no small items. It costs more to make an accurate scientific diagnosis than a guesswork diagnosis. Fifty years ago people were content with a 25 cent broom. Today they require a $75 vacuum cleaner. They will not get as good medicine under a socialized system. The Veterans Administration is not noted for high type of care, nor does it draw the better physicians. Those who have had dealings with bureaus and administrations realize the conflicting orders, directives, petty hierarchy and endless forms that go with such systems. Physicians now returned to civilian life relate that reams of paper work kept many of them from being utilized to the extent of their ability in the armed forces. Duplicate and up to seven copies do not restore people to health.

The proponents of this bill have almost exclusively limited the debate and have kept it on the level of humanitarianism, and it seems to me that it is not too difficult at that level to prove that some Americans who today receive no medical attention would get some under the bill. However, we might point out that this is true on a humanitarian basis about any welfare program. Education has been on the federal statute books for many years, and yet not all children in the United States today are receiving an adequate education. When the argument is advanced that hundreds of counties in the United States do not have a hospital or a single physician in attendance, it can also be pointed out that there are hundreds and hundreds of counties in the United States where no church is to be found, and certainly no minister or priest in attendance, and yet religion has been in existence for thousands of years.

We oppose this bill on the ground that the experience in other countries that have tried a national health insurance plan has failed to accomplish in those countries the purposes for which the legislation was enacted. The cost in most of these countries we believe to be excessive in relation to the benefits received by the individuals in the plan. Certainly the estimated costs for S. 1606 would be far greater than the estimates thus far made would indicate. But, regardless of the cost, we think that the fundamental philosophy underlying title II of this bill is in error and is totally foreign to our American way of life.

We oppose compulsory health insurance on the ground that a study of the countries that have tried this system will show that this type of compulsion does not improve the health of the nation but that in many cases it has a tendency to cause minor ailments to turn into malingering chronic cases. It would take a terrific force of federalized officers and agents to check on those who would receive benefits but who were not unable to work. At the local level it is obvious that local officers are better placed to combat malingering than are the agents of a democratic government of the type under which we live.

We are opposed to compulsory health insurance because it sets up a federal bureaucracy of hundreds of thousands of workers, checkers and agents who would have to be strategically placed in every village and every district of every sizable city. This, it seems to me, would seat the precinct captain on the sickbed. Even granted that under the present system this would not arise, what assurance have we that this nation would not or could not be seized by a demagogue in the future? Similar systems were seized in various countries of the world. It is certainly possible for the politician to create a terrific class of benefit receivers whose votes might be controlled in one way or another. That danger most surely lies dormant in title II.

We are opposed to compulsory health insurance because the enactment of such legislation would cause in this country, we are quite sure, a stampede of special groups who would desire to be excluded from its provisions. This stampede of special groups would cause the system to break down, and therefore we think it is a vital weakness in the bill.

We are opposed to compulsory health insurance because as Americans we hate compulsion in any form. It is true that certain police powers and protection rights of individual citizens are best served by pooling these rights into a common cause, but we think it is a mistake to attempt to say that medical care with its many intangible and psychologic factors can be compared with the building of federal roads. This is an entirely different relationship. It is a relationship between the physician, the patient and their God. It can be pointed out that there is a natural revulsion on the part of any man to compulsion. All we would have to do is turn to our Senator from Montana, as chairman of this committee, and wave our finger at him, telling him that he can or cannot do a certain thing. He would immediately, as would any American, get his "dander" up and revolt at being told what to do or what not to do. This reaction is natural and normal. It exists in every man. We do not like to be pushed around, and we don't like to be told what we can do and what we cannot do. The failure to recognize this innate right in man is, in my judgment, un-American and foreign to the American way of life. The argument, it seems to me, is constantly advanced by the proponents of this bill that some such plan as this bill is inevitable; and, therefore, Congress and the people might just as well accept compulsory health insurance as a fact here and now. The argument of anything being inevitable in the United States under the system of government which we now possess is to admit defeat and to cast aside a wonderful national heritage. The federal government in the past few years has taken authority over an infinite number of details in the everyday life of every citizen. This paternalism has taken the form of favoritism for special groups, but always groups with an organized voting strength. By deliberate design the federal government has broken down state lines and has reached down deep into the everyday lives of the people. S. 1606 would now reach down and grab another portion of this freedom. The extension of such authority is dangerous because it lulls citizens into thinking that a powerful federal government is the only answer to their problems and that this strong central government will

solve all the problems for all people and at any time. If we do this to our citizens, then why not go all the way—have the federal government take over completely and issue food, shelter, recreation and medical care? This totalitarian government could then issue a coupon book to each of the citizens and we wouldn't even need money. But this is un-American, and as Americans we have had the ability to face problems and conquer them under our own free enterprise system.

We are opposed to compulsory health insurance because we think the people of this country are against compulsion of any kind, and in particular against compulsory health insurance in the form presented in title II of this bill. The people in this country are tired of the meddling of the federal bureaucrat into their local and individual problems, and we think that if this proposition was put to a vote on a national basis it would be overwhelmingly defeated, because it not only attempts to meddle into their local problems but into the very lives of individuals. It interferes in the sacred relationship of the patient and the physician.

We are opposed to compulsory health insurance as represented in this bill because it makes mere political pawns of doctors, dentists and nurses. This group of American citizens have given unstintingly of their time and effort and energy as professional people. This has been admitted many, many times before this committee and it seems to me that the making of a political pawn of any special group or of any of the people of this nation should be opposed vigorously. Doctors have been talked about during these hearings as though they were criminals—on trial because they had failed completely. Why this concerted effort if not to control the profession?

We are opposed to compulsory health insurance because it sets up in the hands of one or two men a dictatorial power over the lives of millions of people. Such a system is full of danger to our form of government. True, the bill provides for an advisory council, but we have observed that advisory councils are nothing more than pawns in the hands of the men who appoint them. Under this bill the Surgeon General has the right to appoint the members of the advisory council with the approval of the federal security administrator. Can any one in fairness conceive of any man or men appointing men to an advisory council who would oppose their thoughts and wishes? We have yet in our experience to see any advisory or consultive board set up with such strong opposition within its ranks. The advisory council provided for in this bill would be nothing more than a rubber stamp for the prepared materials and plans that were presented to it twice a year.

We are opposed to title II of this bill and its compulsory health insurance provisions because it is a cleverly worded document whose real purposes, we believe, are hidden in its written words. We are not prone to look under rocks for strange creatures, nor are we by nature suspicious; however, we think that a careful and honest reading of title II would reveal to the average man the introduction and interlining and intermingling of ideas completely foreign to our American way of life. If the proponents of this bill are really sincere in their efforts to help the people of this nation to better health, why do they insist on title II of this bill and always couple it with the provisions expressed in title I, to which no one would object? This certainly raises the flag of suspicion in our minds.

We are opposed to compulsory health insurance because it would make mere numbers of patients and of physicians, dentists and nurses too. A few days ago in Fairmont, Minn., Eddie Barnes, a disabled veteran of World War I, who conducts a magazine subscription and greeting card business from his home, set aside a fund of 5 per cent of all his profits on subscription sales and 10 per cent on greeting card sales as a memorial fund to his physician and friend Dr. H. B. Bailey, who died a few weeks ago. It was set up in gratitude for the many hours Dr. Bailey spent with him. Eddie Barnes said "It is a work Dr. Bailey would like to have associated with his memory, for truly he was one that went about doing good, and this fund, even though it be just a few dollars, would give some one a bedside telephone or radio, a favorite book or magazine or any one of a dozen little things to make living more tolerable." Can you imagine any one setting up such a fund to Dr. Number 63042 at the local federal clinic?

We are against compulsory health insurance federally controlled because we think this opposition represents the average man's opinion in this country. We are not referring to the spokesman for organizations who purport to speak for millions and millions of American citizens or "for all of the American people with the exception of one single, solitary United States Senator," but we think in our limited field in a sparsely settled section of the country that we know the thinking of our own people. We have been with them many, many years, and we know what they think; and it is the consensus among these people that compulsory, federally controlled health insurance is not what they want.

We are against the provisions in S. 1606 because we believe it is not the answer to the immediate needs of the health problems in this nation. If this bill was passed this very day it could not be put into operation for many, many years to come, because there are not sufficient doctors, there are not sufficient hospitals, there are not sufficient nurses nor sufficient dentists in this country today to administer to all of the needs. Why not then focus our attention on these immediate needs and pass those individual bills which can prepare the way for a better and healthier America? The Hill-Burton bill passed by this committee is a step in the right direction. It provides for a survey of the hospital needs of this country. It provides for aid to those parts of the country where hospitals will be needed. Why not attack the other individual and urgent problems that face the nation in a similar fashion? It is our earnest plea to this committee that the compulsory health insurance features of this bill be defeated and that the individual pressing and urgent problems that face this nation be encouraged, developed and put into legislative form so that all real Americans who desire a better and healthier United States can back them without any reservation.

SENATOR MURRAY: Thank you, Doctor. I am sure that you recognize that in the nation there is a problem of getting medical care to certain classes of our people who are in the lower income brackets and who find it difficult to pay for the modern medical care because of the expense. DR. FOSS: That is true.

SENATOR MURRAY: And we have had many doctors who have come before the committee here opposing the bill, but they have recognized that the action of the proponents of this bill has been sincere and honest and undertakes to meet a problem which really exists in the country. And the hearings that we are holding now are for the purpose of determining and investigating the whole problem to see what can be done to bring about a better distribution of medical care in the country, and you are in accord with that idea? DR. FOSS: Yes. I am very much so.

SENATOR MURRAY: But you do think that the compulsory features of this bill are wrong? DR. FOSS: Yes.

SENATOR MURRAY: And should not be in this bill. Would you be in favor of a system whereby each state would have an individual system of bringing about modern medical care for the people? DR. FOSS: I think I would, yes.

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SENATOR DONNELL: Doctor, on page 6 of your manuscript, paragraph 5, I am not quite clear as to the meaning of that. You say "We are opposed to compulsory health insurance because the enactment of such legislation would cause in this country, we are quite sure, a stampede of special groups who would desire to be excluded from its provisions. This stampede of special groups would cause the system to break down, and therefore we think it is a vital weakness in the bill." Would you be kind enough to explain just what is the thought in your mind there? DR. FOSS: I was thinking of our Northern Pacific Beneficial Association with assets of about $2,500,000; they might want to get out of paying into the federal government.

SENATOR DONNELL: These persons who are already the recipients of benefits under the particular plans of the states or organizations might desire to be excluded from the necessity of paying again in the federal system. DR. FOSS: Yes.

SENATOR DONNELL: Doctor, on the first page you refer to a visit made by the secretary of the Montana Medical Association, president, president-elect and the delegate to the American Medical Association. You state that those gentlemen made a visit to every county medical association in the state. I am interested in that because of the mention frequently made in the testimony as to whether or not the House of Delegates of the American Medical Association fairly represents medical opinion over the country. Dr. Irwin attends, does he, meetings of the House of Delegates of the American Medical Association? DR. FOSS: Yes, sir. He has been a member for a number of years.

SENATOR DONNELL: In your judgment, from your observation of him, do you think he understands and attempts to give the benefit to the American Medical Association of the views and sentiments of the people of Montana? DR. FOSS: I think so. I have heard him give his annual report to the House of Delegates each year, and he seems to understand it.

SENATOR MURRAY: Doctor, your organization, known as the Northern Pacific Beneficial Association—DR. FOSS: Yes.

SENATOR MURRAY:—and under the system you operate there, whenever an employee of a railroad gets injured or becomes sick you render medical care and hospitalization for him? DR. FOSS: Yes, sir.

SENATOR MURRAY: And your organization has very high class physicians and surgeons? DR. FOSS: Yes, sir.

SENATOR MURRAY: Some of your surgeons were taken into the Army during the war and now provide high class physicians in the Army? DR. FOSS: Yes.

SENATOR MURRAY: And the service you render does not deteriorate in any manner merely because of the fact that the service rendered to them is under a contract system that you have? DR. FOSS: I do not feel so. I feel it has given the very highest quality.

SENATOR MORSE: Do you not think that the principle involved in a good many of these beneficial associations, such as your railroad association and your industrial medicine contract associations, have at least some of the same principles involved in them that are involved in this bill, as far as group benefit is concerned? That is, after all, the workers, we will say, under an industrial medicine contract, they practically, in a way, have to take the doctor that functions under that contract. They really do not know him, and there is not much of a personal relationship between the patient and the doctor in those cases, after all, in the type of practice like that, as there is in the type of practice that Dr. Cooney engages in? DR. FOSS: I know in our country they get very good service in all of those organizations, as far as I know.

SENATOR MORSE: I am sure they do. I do not want to mislead you at all. What I am trying to do is, I endeavor to think through this type of legislation and satisfy myself what the good principles and the bad principles of it are. We have heard a lot of testimony from the witnesses heretofore that would seem to indicate that this is not going to result in good medical service if a patient gets his medical attention through the principles of this bill, because there is a group medicine principle. And then I have not felt that they have always been very consistent about it, because many of the associations which the doctors themselves have formed, and the industrial medicine and medical associations, for contracts, are, after all, group medicine arrangements. To exaggerate, in order to point out what I have in mind in which the patient is, after all, a number, and the doctor is pretty much a number to the patient: When he is hurt in the woods or rushed to some hospital, he does not know under one of these industrial medicine contracts what doctor is going to treat him, and does not very much care. He does have confidence in the contract and he is satisfied that under that contract he gets the best care that can be given him under the circumstances, and hence I find in my thinking that there is too much a tendency, I believe, on the part of some segments of the medical profession, at least, to overemphasize this personal relationship between the doctor and the patient, because I do not think it exists very much under contract medicine. DR. FOSS: I do not believe it exists either. Our association has been, since 1881, functioning, since that time, and the patients do not have to come to us. They can go anywhere for their medical care, but it is really very rare that they go other places except to us.

SENATOR MORSE: Then would you say that among your objections to this bill you would not overemphasize the point about the contract medicine features of it, that is not what makes the bill so bad? DR. FOSS: No. It is the compulsory health insurance; that is the thing that I do not like about the bill.

SENATOR MORSE: The second question that I want to ask this witness, Mr. Chairman, I would base on the language of the statement beginning with the last sentence on the top of page 10. "If this bill were passed this very day, it could not be put into operation for many, many years to come, because there are not sufficient doctors, there are not sufficient hospitals, there are not sufficient nurses nor sufficient dentists in this country today to administer to all of the needs." I think that is true. In fact, I made comments to a similar effect earlier in these hearings, and yet I want to point out to you how significant I think that statement of yours is to this problem that we, as politicians, are grappling with. I want to put it this way: I will not put it in the form of a question, although I might. I might ask you Is the medical profession aware of the fact that the providing of adequate medical health to the American people is a political issue in this country? I am not a very good politician, but I am a pretty cold realist. The point I want to make is that we just cannot ignore the providing of adequate health to the American people as a political issue. There is just no way of wiping that off the slate. There it is. And it is a political issue, in my judgment, because of the very observation you make here. There are thousands and thousands of American people that recognize that there is not sufficient number of doctors, hospitals, nurses or dentists to administer to the health needs. That is basic in this agitation, the political agitation, for more adequate medical attention for the American people. Now we as politicians and your elected representatives must take some action. I am expressing my view here, because I want your comment on it. I think it is important that we get the doctors to understand it too. If we have criticisms of this bill, and some of us do, we can make those criticisms to our heart's content, but we are going to have to come right back to this fundamental question of the time that the voters are going to put up, "When are you people going to get for us through government by some means a more adequate health program than the medical profession has been able to supply us to date?" You may say "Well, I do not think it is as bad as they make out." That is probably true, but I want to point out that that demand, I think, is a political issue. I think it is going to become a more pronounced one as the years go by unless the politicians, so to speak, and the medical profession, and the groups of people interested in more adequate medical education can somehow get together on a program of study and make some progress in this field rather than one that may seek to accomplish the impossible overnight. I do not know whether I make myself clear. DR. FOSS: I understand; yes.

SENATOR MORSE: I would be pretty misleading to you if I did not at least say I think one of the things that the American doctors have not quite been able to reconcile themselves to is this, that this is a political issue in a democracy and that within a democracy, of course, subject to all the abuses that may develop, there is nothing that can stop a democratic people if they feel that there are not enough doctors and not enough dentists and not enough nurses and not enough hospitals to give them the medical care and attention they think they are entitled to; there is nothing that can stop people in a democracy from saying "We will do something about it politically." That is what we are up against. I think it will grow year by year, which makes it more important, and we should try to get together, the politicians and the doctors and the patients, and work out a program that will answer this comment you make on page 10, which I think goes to the heart of the whole thing. I did not put it in the form of a question, but I wanted to get the idea across, and I will welcome any comments you want to make on it. DR. FOSS: I do not have any comments. There is just a shortage, that is all.

SENATOR MURRAY: The next witness is Dr. Robert Benson. SENATOR MORSE: I want to say, Mr. Chairman, that Senator Cordon and I are very glad to have Dr. Benson and Dr. Baum here to bring to the committee the point of view not only of Oregon medical groups but a discussion of what has become known as the Oregon and Washington Plan of Medical Service.

Statements of Dr. Robert L. Benson and Dr. William A. Baum, Oregon Physicians' Service, Oregon State Medical Society

DR. BENSON: The council of our society has given thoughtful consideration to Senate bill 1606 over a period of several months and is in fairly close agreement with many laudable provisions in its text. We favor grants-in-aid to states for the study, prevention, treatment and control of tuberculosis and venereal diseases, provided state management and local determination of need are maintained. The same policy holds for maternal and child health care and for full medical, surgical and nursing care and hospitalization wherever actual need is shown. It is obvious also that hospital building has necessarily lagged during the war and that many localities are lacking in such facilities. Physicians cannot carry on their practice satisfactorily without a hospital to which they may refer their patients. Nor will the doctor be attracted to such a locality as against one which is well equipped. The resulting lack of medical care could be corrected largely by the provision of grants-in-aid for a much needed hospital building program. Such a plan is evidently under way in other legislation. There is unquestionable need for aid to colleges, both private and state operated, for the furthering of professional teaching, research and clinical practice, including provision for refresher courses and longer postgraduate courses. Most of the existing schools already have high standards and have suitable curriculums. Their research facilities are, however, hampered by shortage of funds for equipment and technical help, and many instructors and professors are leaving to engage in more lucrative lines of endeavor. Grants-in-aid to relieve this financial need could prove valuable

in maintaining the size and qualifications of the teaching and clinical staffs and thereby raising the standards of instruction, clinical experience and research in eligible institutions. The resultant level in quality of medical care should soon benefit. The outlay need not be burdensome, and the independence of thought and free choice of methods need not be interfered with. Here again the necessity of local control should be emphasized.

Mention should be made here of a serious deficiency in the health proposals of S. 1606. Since 1875 the American Medical Association (see A. M. A. Platform, page 5, paragraph H) has been advocating a single federal health agency to include under its jurisdiction the various health activities of the government. Yet up to this time the United States Public Health Service and the Food and Drug Administration are still under the Social Security Board; the Children's Bureau is under the Department of Labor; the Veterans Administration constitutes a separate bureau of the government. It is my understanding that ours is the only great system of government in which there is not a separate ministry of health. The Oregon Medical Society has recommended adoption of such a plan.

In title II, Prepaid Personal Health Service Benefits, we have to consider those provisions of Senate bill 1606 which have met with almost universal disapproval from the medical profession of the United States. I refer to the compulsory health insurance clauses. These would impose a one man dictatorship over the medical, dental, nursing and hospital care of something like 120 million American people. It is my understanding that under the somewhat vague and indecisive terms of the act the Surgeon General, operating under a layman, the Federal Security Administrator, would be empowered to:

1. Hire doctors, dentists, nurses and technicians; define their duties, methods of treatment and rates of pay.

2. Establish the rate of pay on the basis of fees for services, rendered according to a fee schedule; on a per capita basis according to the number of individuals who are on the practitioner's list; pay on a salary basis, whole time or part time or on a combination of these methods, as the Surgeon General may approve.

3. Fix the qualifications for specialists.

4. Determine the number of individuals any doctor or dentist may serve and in what geographic bounds.

5. Determine what hospitals or clinics may admit patients and under what conditions.

6. Provide doctors, dentists, nurses, laboratory technicians and hospitals for wage earners and all unemployed persons and their respective dependents.

7. Direct the spending of the vast sums of money included in this huge program.

The Council of the Oregon State Medical Society recently passed a resolution disapproving the compulsory features of S. 1606. As an alternative it endorses the medical society type of voluntary prepaid plans, of which Oregon has had several. The one of these which has statewide coverage, the Oregon Physicians' Service, was organized in 1941 and has been in operation since 1942. Dr. W. W. Baum of Salem, Ore., who was one of the incorporators of the plan, is here to testify before the committee. He is well acquainted with its provisions and will acquaint you with any desired details. I can assure you that the Oregon Physicians' Service plan for voluntary medical coverage has met with a most gratifying reception from physicians and patients. We do not claim that it is yet perfect. Changes will undoubtedly be made from time to time, but eventually it is intended that we shall be able to meet all the requirements. Meanwhile our sister states California and Washington have comparable setups. The ultimate hope is that, through conferences between delegates of such local groups from all over the country, we shall eventually arrive at the ideal type which will insure the highest possible quality of medical care at a cost below that which could be attained under federal control. In that way only can the high standards of medical practice be maintained and the time honored relation of doctor and patient be retained.

SENATOR DONNELL: Doctor, among the very interesting statements in your discussion this morning is that which appears on page 4, in which you say "It is my understanding that under the somewhat vague and indecisive terms of the act the Surgeon General, operating under a layman, the Federal Security Administrator, would be empowered to hire doctors, dentists, nurses and technicians, define their duties, methods of treatment and rates of pay." I am wondering as to the power to which you refer and which you construe the act to vest in the Surgeon General operating under the Federal Security Administrator, whom you point out to be a layman. Did you have in mind the particular sections of the act that convey to the Surgeon General the power of prescribing methods of treatment to be followed by the physicians? DR. BENSON: I think I could find them.

SENATOR DONNELL: Perhaps I might ask you whether or not you have in mind the provisions on page 36 under "Administration," where it is prescribed that the Surgeon General "shall also have the duty of studying and making recommendations as to the most effective methods of providing personal health service benefits," and then the further provisions defining personal health service benefits, which definition appears on page 65 to include "general medical benefit, special medical benefit, general dental benefit, special dental benefit, home nursing benefit, laboratory benefit and hospitalization benefit." The further provisions on page 38, under which the Surgeon General is authorized, after consultation with the board and after consultation with the advisory council, and with the approval of the Federal Security Administrator, to "prescribe and publish such rules and regulations and require such records and reports. . . ." The further fact that the Surgeon General has the power, as I recall it, to designate who shall be qualified as specialists or consultants and entitled to the special rates of compensation provided for specialists and consultants as set up at pages 45 and 46. Also the provision on page 46 at or about lines 18 to 22, in which it is prescribed that "the services of specialists and consultants shall also be available when requested by an individual entitled to specialist and consultant services as benefits and approved by a medical administrative officer appointed by the Surgeon General." DR. BENSON: That is correct.

SENATOR DONNELL: I shall not read any further illustrations, but is it this general power that the Surgeon General has to prescribe rules and regulations to designate persons who are considered by him to be qualified, provisions of that type, which, in your judgment, do vest in the Surgeon General, subject to the approval of the Federal Security Administrator, the power to prescribe actual methods of treatment? Am I correctly outlining and interpreting your thought and the basis of it? DR. BENSON: That is correct, Senator Donnell, and I was also taking into consideration my own experience with federal agencies, for instance the Veterans Administration. I have served under that as consultant in the past years over a period of years, and it has been my observation in that respect that there was always a tendency to prescribe certain methods, certain definite methods, and even to the point of specifying certain forms of medication; that the doctor who is responsible for the care was limited somewhat in the particular medication which he could give and even to the point that the administration might advertise for bids for a particular type of medication, and the physician much prefers to be able to prescribe what is best rather than that which comes cheaply.

SENATOR DONNELL: Doctor, you have made it even more vivid than from any other witness that has appeared here, as to the thought you have in your mind, and the danger that I understand you to see envisaged in this legislation along the line of vesting way up here in Washington in the hands of the Surgeon General under the control of a layman, the Federal Security Administrator, the actual power as a practical matter to prescribe methods of treatment. You regard that, I take it, as a very real danger under this bill? Am I correct in that? DR. BENSON: I do, Senator, with one qualification. I am not really as much afraid of a layman at the head of it as my words might have implied.

SENATOR DONNELL: There still exists in your mind, as I get it from the language at page 4, where the first point you make is that the Surgeon General would be empowered to define methods of treatment, that you feel that there is a danger, in view of the control in certain administrative respects, in the fixing of fees. DR. BENSON: Yes.

SENATOR DONNELL: The selection of persons who are deemed to be qualified. DR. BENSON: Yes.

SENATOR DONNELL: All these powers residing in the Surgeon General. You feel, as I understand it—and if I am incorrect, please check me—you feel there is a very real danger that there will be a species of domination, or a possibility, at any rate, of it in one hand or one head or one person up at the top of this plan of prescribing methods of treatment all over the United States which might not be advisable in the proper development and independent development of medical science. Am I correct in that statement?

DR. BENSON: That is correct, Senator. I feel that too much centralization of power, when dictated to the doctor in the treatment and handling of patients, would hamper him in giving the best form of treatment. SENATOR DONNELL: Yes. And is it not a danger also, Doctor, that is inherent in human nature that doctors over the country would like to be on good terms with the Surgeon General? They would like to be considered as not in opposition to the policies of the administration of this plan, that there might be a tendency on the part of some to surrender their own personal initiative in favor of the suggestions made by the Surgeon General. There is that danger, is there not?

DR. BENSON: That is correct. By following the lines of least resistance. SENATOR DONNELL: Yes, sir.

. . . . . .

SENATOR DONNELL: There is no provision in this bill, so far as I know, Doctor—and if I am wrong, please check me again—which gives to the person, we will say, in Walla Walla, Wash., the right to select a doctor over somewhere in the area out of that area, perhaps some other point in the state of Washington or over across the line into Oregon. There is no provision of that kind, is there? DR. BENSON: That is my impression from reading the bill.

(Dr. Benson, following questions by Senator Donnell, brought out the difficulties of administering a compulsory sickness insurance system.)

SENATOR MURRAY: We had a doctor here just a few days ago from New York, Dr. Baehr, who is, I believe, president of the American Academy of Medicine in New York, a very important institution, which makes studies of problems of this kind, especially problems with reference to medical care. And he went over the bill very carefully and offered a great many criticisms to it. And I think that as the result of all the testimony that we have been receiving here we have been able to discover many deficiencies and defects in the bill that should be remedied. Of course, you appreciate the fact that the bill also provides a national advisory medical council, policy council, which is to be set up under the bill, and provides among other things here that the advisory council "shall advise the Surgeon General with reference to questions of general policy and administration in carrying out the provisions of this title, including (1) professional standards of quality to apply to personal health service benefits; (2) designation of specialists and consultants; (3) methods and arrangements to stimulate and encourage the attainment of high standards through coordination of the services of general or family practitioners, specialists and consultants, laboratories and other auxiliary services, and through the coordination of the services of physicians and dentists with those of educational and research institutions, hospitals and public health centers, and through other useful means" and it goes on with the other provisions there in that respect. And that advisory council also, it is provided, "shall establish special advisory, technical, regional or local committees or commissions, whose membership may include members of the advisory council or other persons or both, to advise on general or special questions, professional and technical subjects, questions concerning administration, problems affecting regions or localities, and related matters." So that there is an effort here made to provide a system under which the medical profession in each section of the country shall be able to help in carrying out the provisions of the bill. You observe that? DR. BENSON: Yes. In that connection, Senator Murray, I would have the same objection that I believe Dr. Foss made that this council is, after all, appointed by the Surgeon General, and the additional objection that this council has no power except to report. That is in the terms of the bill.

SENATOR MURRAY: Of course, it has to make a report of its consultations, and if it failed to recognize the doctors and physicians of the local community in the recommendations that were made to him he would have to report that, and if it was found that he was failing to recognize it, of course, something could be done about it. And then I might call your attention also to the fact that while that council is under the bill to be appointed by the Surgeon General, some other procedure for appointing that council could be provided, could it not? DR. BENSON: I think it should.

SENATOR MURRAY: For instance, in the various states, if the council was named or recommended by the state medical association, that would be satisfactory, would it not? DR. BENSON: I am not quite sure, Senator Murray, just what would be the best provision, but I do feel that the council should, if possible, be given some power which would add rather than just be supportive of the authority of the Surgeon General. It does not seem to me that it adds much except that he can call on it for advice, which he may or may not follow. It does not follow that he has to observe the recommendation, even the unanimous recommendation, of such a council.

SENATOR MORSE: I do not have any question, Dr. Benson, except to make this comment: that I am glad you put in your testimony the material starting at the bottom of page 3 and running through the first paragraph at the top of page 4, in which you express yourself in favor of combining the health department where these various health agencies can be brought under one department. I shall send to you as soon as it is ready for comment a bill that is now being drafted by a group of us that seeks to accomplish what you have in mind, I think, although it may be broader in scope than you have in mind, because it would be a combined public health and welfare bill, with a position in the cabinet, and I would like to get your comments on it when it is ready. DR. BENSON: Thank you, Senator.

(Senator Donnell brought out that the advisory council might be dominated by laymen.)

DR. BENSON: If I may just conclude with one statement that defines my position on the bill in general: There are many minor details that might, from the medical standpoint, be undesirable, but emphasis should be called to real objections throughout, and the irreconcilable objection is the compulsory insurance plan that occurs in title II.

SENATOR DONNELL: The gentleman appearing here from Montana this morning referred to the delegate from the American Medical Association interesting himself in going around all over the state. DR. BENSON: Yes, sir.

SENATOR DONNELL: Do you regard that the delegate to the American Medical Association from your state possesses an adequate opportunity to know the sentiments and the views of the medical profession all over the state? DR. BENSON: I do, Senator, and if our delegate had not done that he would not have been reelected repeatedly. Dr. Fitzgibbon, who is our delegate, over a period of years always made it a point to attend the meetings of the council and the house of delegates of the state society, to interest himself in all the state medical activities and he always attended the meeting of the national House of Delegates.

SENATOR DONNELL: And he would not have been reelected as you have indicated, I take it, if he had not fairly represented the views that your Oregon doctors felt to be the correct views; is that right? DR. BENSON: That is right.

DR. BAUM: The facts which I shall present are those which we have learned in the operation of prepaid medical plans in the state of Oregon during the past fifteen years. It is my understanding that I am here because the committee is interested in hearing about Oregon Physicians Service. Oregon Physicians Service is a prepaid medical service plan sponsored by the physicians of Oregon and operated on a nonprofit basis. Under this plan we write three types of contracts: first the full coverage medical and hospital agreement, second the supplemental group family surgical, obstetric and hospital service agreement, third the supplemental group family hospitalization agreement. In the first type of agreement, the full coverage plan, the individual pays to Oregon Physicians Service the sum of $3 per month; I may say that the sum is at present $2.50. We are not coming out on it and it is necessary to raise it to $3 beginning June 1, in return for which Oregon Physicians Service agrees to furnish this individual the medical and hospital service required for the proper treatment of any illness or nonoccupational injury. Occupational injury, of course, is covered by the state industrial accident commission. Medical service provides for the usual examinations and treatments by physicians, including specialist's care, an annual complete physical examination, x-ray examinations and prophylactic measures such as smallpox vaccination or inoculations with the various antitoxins. Limited dental service is also provided. Hospital service provides for hospitalization including all such items as the use of surgery, x-rays, laboratory fees and medicines used while in the hospital. Hospitalization in private rooms and the services of special nurses are provided when necessary. Certain diseases, such as insanity, alcoholism and drug addiction, are excluded and there is some limitation on the treatment of chronic illnesses in the present contract. However, the wording of the contract is such that most chronic illnesses do receive treatment and it is our intention to remove this limitation on the treatment of chronic diseases in the near future.

The second form of contract is the supplemental group family surgical, obstetric and hospital service agreement. I apologize for the name, but apparently they tried to put in a descriptive name; it is a contract designed to supply medical and hospital service for almost all serious illnesses and injuries which might affect the members of the family of the employee who is covered under the full coverage agreement and to eliminate coverage for minor complaints. To accomplish this the contract provides medical and surgical services for all major and minor operations, the treatment of fractures and dislocations and obstetric service. The cost of this contract varies according to the size of the family but is not more than $4.60 per month for a family of any size.

The third type of contract, the supplemental group family hospitalization agreement, provides for hospital service only which is supplied for any illness or injury. The cost of this contract also varies with the size of family but is not more than $1.50 per month for any family.

This briefly outlines what Oregon Physicians Service is and the types of coverage at present offered to its subscribers. Its method of operation and the reasons for its successful operation can best be understood by giving you a brief review of the history of this organization and the organizations which preceded it in the state of Oregon. In 1930 a plan was inaugurated in the city of Salem under the name of "Salem Physicians and Surgeons Hospital Association." There were at that time about thirty physicians practicing in Salem, and all but two or three agreed to offer their services on a contract basis to groups of employed persons to provide a coverage very similar to that outlined under the full coverage medical and hospital agreement. Salem physicians spent a great deal of time in serious study before embarking on this venture, and all the physicians were thoroughly indoctrinated in the purpose of the plan and the cooperation that would be required to make it successful. A board of directors was elected which was truly representative of the physicians in the community. This board held frequent meetings and participated actively in the operation of the business, even to the point of scanning carefully items of minor expense and reviewing the treatment provided in each individual illness. During the formative years of the Salem plan, members of the board of directors held many meetings with various groups of employees covered under the plan, giving them a clear picture of how the plan worked, what our problems were and how the plan must be operated if it was to provide adequate service and the cost to the subscriber kept down to a reasonable level.

I mention these facts not for the purpose of offering praise to the people of Salem whose contribution of time and effort made the plan possible, but to emphasize the fact (which I shall discuss more fully later) that plans such as these succeed only when there is complete cooperation and intelligent cooperation of the physicians supplying the service and the subscribers who receive the service. Neither do I mean to imply that the people of Salem made any greater contribution than people in other parts of the state since, during the next ten years, similar plans were set up in other communities about the state until there were eleven in all, and in each group the same effort had to be made on the part of both physicians and subscribers. The eleven plans covered the state fairly well, as they were established in centers of trading areas. The plans were all successful in the sense that the individuals covered were generally well satisfied with the services supplied and the physicians cooperated wholeheartedly.

As the years passed, some of us became convinced that it would be quite desirable to establish a plan which could operate on a statewide basis. Accordingly, in 1941 Oregon Physicians Service was formed and began its operation in 1942. At the time of the formation of Oregon Physicians Service it was anticipated and expected that the local organizations which had preceded it would become amalgamated into Oregon Physicians Service and this has occurred, with the exception of four of the locals. Oregon Physicians Service cooperated fully with the remaining four locals; their doctors are also on the staff of Oregon Physicians Service, and each may give service to the other's patients. At the present time, of the (approximately) 950 actively practicing physicians in the state of Oregon, 905 are on the staff of Oregon Physicians Service. As of Dec. 31, 1945 Oregon Physicians Service covered 48,880 subscribers. This is a drop from the previous year, when we covered 85,811 and is due to the closing of war industries with consequent shifting of workers. These workers are rapidly coming under coverage again and we expect soon to reach and exceed the previous level. We now have as of this date approximately 55,000 covered. The four locals which have not yet joined Oregon Physicians Service cover about 20,000 more people.

At the present time in Oregon we feel that from our experience of fifteen years we have learned how to operate this type of contract practice successfully, that we are in a position to know its advantages and limitations, are well informed of the factors which make such plans successful and are equally well informed of the factors which make success impossible. We are aware that the medical profession in many other states has passed through similar stages of development and that the profession as a whole is now in a position to expand this type of coverage rapidly to cover the entire country. We feel that each state should have its own organization and we also feel that one state is the largest unit that should be covered by a single plan. We believe that it is necessary to have an organization to facilitate cooperation between state plans and are giving our wholehearted support to Associated Medical Care Plans, the organization which has recently been formed for that purpose. It is my understanding that thirty-eight states now have or are forming state plans and will cooperate under Associated Medical Care Plans.

SENATOR DONNELL: Pardon me, Doctor, is that Associated Medical Care Plans the organization that has been formed under the auspices of the American Medical Association? DR. BAUM: Yes, sir. I am not certain to what extent the American Medical Association sponsored the formation of this Associated Medical Care Plans. Actually, the members of the commission on this Associated Medical Care Plans are individuals from various states who have plans like ours, and the pressure came from below, from us, rather than from the American Medical Association. It is, however, approved by the American Medical Association.

SENATOR DONNELL: Perhaps I should not have used the word "auspices." However, I am correct in my understanding that it is the one recently organized under the laws of the state of Illinois? DR. BAUM: That is correct, sir, and it is approved by the American Medical Association. I shall now turn to a discussion of certain facts and ideas which have developed from our operation of Oregon Physicians Service and which I feel may be pertinent in consideration of S. 1606. It has been frequently stated that one of the most serious problems we have to face in this country is the fact that any family may be struck by an illness that threatens that family with economic disaster. I agree that this is a serious problem and I believe that one of the goals which should be attained in the near future is to lift the burden of expensive illness from the individual. It is also my opinion, however, that the occurrence of these catastrophic illnesses so impresses our minds and so arouses our sympathies that we are inclined to overestimate the frequency of their occurrence. They form but a small part of the total medical care received by the people each year and consume but a small part of the total funds paid for that medical care. I base this opinion on my own experience as a practicing physician, on the experience of other physicians with whom I have discussed the matter and on the experience of Oregon Physicians Service. For the purpose of this discussion I have considered that any illness costing more than $100 in doctor and hospital bills should be considered an "expensive" illness. Of the individuals covered by Oregon Physicians Service, we have found that less than 10 per cent require expenditure of more than $100 for doctor and hospital bills in any one year. Or the picture may be presented in a different manner by stating that in our experience approximately 70 per cent of the total medical dollar goes to pay for illnesses costing less than $100 and only 30 per cent to pay for illnesses costing more than that sum. These figures, of course, are for a certain population group, the employed group, and the percentage would, no doubt, change if other groups were included. I believe, however, that they are statistically significant and would not be radically changed by the inclusion of other groups.

Our main endeavor in formulating prepaid medical plans should be the elimination of this burden of the expensive illness because of the serious economic consequences to the individual, because the expensive illness is also the illness which disables and kills and because it is a problem which can be solved practically and with relatively little expense. It is not the coverage of expensive illnesses which causes prepaid medical plans to become expensive or to fail—it is the attempt to provide complete medical service for the minor illnesses and complaints. Many believe that if people could visit their physicians without cost they would call for his services earlier in each illness, and

this would be desirable in preventing minor illnesses from becoming more serious. It has been observed under Oregon Physicians complete coverage that this desirable situation is not actually brought about. In this regard people may be divided roughly into three groups or types: The first type demonstrates the capability of making an intelligent decision as to when medical care is required and do not tend to call for it needlessly or to prolong its use. The second type, of a euphoric nature, or ignorant or unobservant, neglect early signs of illness and are brought to the physician only by pain or fear. These two types are influenced but little by the financial factor in seeking medical care. The third type includes those individuals, preoccupied with their bodily sensations and symptoms, who come to the doctor needlessly and who insist on an undue amount of medical care in each illness. This third group, quite large in number, is influenced by the financial factor in seeking medical care, and it is their activities which increase tremendously the cost of prepaid medical plans.

The second matter which I wish to discuss is efficiency of operation. Under the general term "efficiency" I include cost, maintenance of the quality of medical care and satisfaction of the patient with the service. In our operation of a prepaid medical plan we have found that, beyond a certain relatively small size, increase in the size of the operation does not increase its efficiency. Rather, there is a definitely opposite trend. The reason for this is that medical care consists of a large number of individual, separate and highly personal relationships between doctors and patients. Proper medical care consists of the treatment of the patient as an individual human being and not merely as a disease entity. Because of these facts the efficiency of medical practice cannot be improved by any type of production line operation, planning or regulation. This loss of efficiency in medical practice has been demonstrated repeatedly throughout the years in all types of contract practice and was illustrated perfectly in the military service during the war, where in spite of the most skilful planning on the part of able and conscientious men it was demonstrated that all regulating and organizing resulted only in an increase in the number of doctors required to care for a given number of people. In making this statement I am referring not to combat units but to posts, camps and stations in the continental United States, which were comparable to small cities in the supplying of medical care to the inhabitants.

The third matter which I wish to discuss is that of the cost of supplying complete medical coverage. Oregon Physicians Service is at present charging its subscribers $3 per month. Although we cover a relatively small number of people, we have demonstrated to our satisfaction that increasing the size of the operation will not lower the cost. We do not supply drugs except to hospitalized patients, and the cost of drugs will run not less than 10 per cent of total income. Our administrative costs have varied in the neighborhood of 10 per cent and were 12 per cent for the year 1945. I doubt that this expense can be decreased by increasing the size of the operation, particularly an operation carried on by the federal government. We do not include in our coverage invalids or children. I must conclude, therefore, that the cost of carrying out the provisions of title II of Senate bill 1606 cannot be less than and must be more than the cost of Oregon Physicians Service. How much more the cost may be, I do not feel qualified to estimate, but it certainly could not be less than $3.50 per month, or $42 per year, for each individual covered.

I should now like to compare Oregon Physicians Service and title II of Senate bill 1606 as to certain similarities and certain differences. Oregon Physicians Service is not and has never been considered by us to be insurance. It is a form of contract practice. The agreement made between Oregon Physicians Service and the individual covered reads as follows, with certain legal verbiage omitted: ". . . Oregon Physicians Service for and in consideration of the sum or sums of money paid to it . . . agrees to make available to each employee under this contract . . . as occasion demands . . . medical and surgical service, hospital accommodations, ambulance service, dental and other benefits as follows: . . ."

Section 201 of S. 1606 reads "Every individual who is currently insured and has been determined by the board to be eligible for benefits under this title in a current benefit year shall be entitled to receive personal health service benefits."

It will be noted that the language is very similar and that Oregon Physicians Service and the federal government each agree to deliver to the individual covered medical, hospital and other services. There are, however, the following differences: Under Oregon Physicians Service the doctors of Oregon with medical service to deliver voluntarily agree to sell that service on a contract basis. Under Senate bill 1606 the federal government, which has no medical service to deliver, contracts to deliver such service and in so doing is selling the service of the physicians of the United States on a contract basis and, I might add, is selling this service under conditions not of the physicians' own choosing and against the will of the majority. I question the ethics of this procedure and believe that it is justified only if a state of emergency exists in regard to the public health. Oregon Physicians Service has never contracted for or encouraged people to believe that they might obtain services beyond our capability to deliver. Senate bill 1606 obligates the federal government to deliver complete medical service to every individual for every illness and encourages people to believe that it can obtain this service. Such obligation is impossible of fulfilment for the simple reason that there is not a sufficient number of doctors in the United States to do that amount of work.

SENATOR MURRAY: Can you tell us the number of people that are receiving service under the several plans that you have described? DR. BAUM: The Oregon Physicians Service covers as of this date approximately 55,000. Twenty thousand more under the four local plans who have not yet amalgamated would make a total of about 75,000 people.

SENATOR CORDON: I am interested, Doctor, in how the individuals come under the plan: whether they come as the result of advertising and solicitation or whether you feel that you are not entitled ethically to advertise the service. DR. BAUM: That point of ethics was discussed at great length when these things first started, Senator Cordon, and we found, although we thought we were delivering a lot of medical service for a very small cost, it was still necessary to sell this to the people. Consequently we have done so and we employ salesmen for that purpose. We try to keep our selling, advertising if you wish to call it that, on an ethical plane. It is sold to groups of employees for the reason that we have no practical method at present for selling it otherwise. However, a group of employees as small as eleven may come under the plan, so that it reaches down into the very smallest organization.

SENATOR CORDON: Have you given consideration to broadening the coverage to include individuals rather than groups? DR. BAUM: Yes, sir. If there is a practical method of doing so, we would do it. I might refer further to amplify the previous point, if you will permit me, that as of Dec. 31, 1945, when I said we covered some 50,000 people, there were 1,434 separate contracts in effect. So you see, it does not consist of a few large groups of employees, but that number of contracts now must be well up toward 2,000 separate contracts.

SENATOR CORDON: Well, I think that at one time there was a hospital association, or something of that sort, operated in the city of Portland, where individual contracts were written. Are you familiar with that operation? DR. BAUM: Operated in the city of Portland?

SENATOR CORDON: Some type of health protection. My memory is that it was called a hospital association. DR. BAUM: As you know, the term "hospital association" is common in Oregon and denotes usually medical service as well as hospital service, as I have said. Our only reason for selling to a group of employees is purely a practical one. We would like to reach every one. I am not familiar with the group you refer to. In Portland there has only been one or, rather, two ethical associations. The first was the Multnomah County Association, which was later absorbed into the Oregon Physicians Service.

SENATOR MORSE: Along the line of Senator Cordon's questions, Doctor, one of the criticisms that I have heard is that the plan has been, as you say, for practical purposes, limited almost entirely to groups of employees with the result that a great many people do not have any of the benefits of the plan. For example, suppose I am a resident of Salem. Suppose, as a resident of Salem, I am a dentist. Could I come to you and say "I would like to use one of these contracts, although I am not a member of a group of employees, and the contract is not taken out with a group, but I want it taken out with me as an individual"? DR. BAUM: That could not be accepted directly, Senator Morse. Our reason for contacting groups of employees, as I say, is a practical one. I am going in a roundabout method to bring out this operation. The Oregon Physicians Service, although it is state wide in operation, does not enter any county to carry out its operations until the physicians in that county have invited it to enter, and the physicians in that county more or less lay down the rules under which it shall operate. Con-

sequently, if you, as an individual, would come to the local office of the Oregon Physicians Service in Salem and say "I want to be covered," the chances are they would cover you. There is nothing to prevent them, if they wish to do so. If you would form a group of friends of six or seven or eight or ten and would guarantee the monthly payment, so that it was not necessary for the office to bill each of you individually to collect this monthly payment, then I am quite sure you could be covered.

SENATOR MORSE: Let us dwell on that a moment. Under the plan as it is now the arrangement is made with a group of employees, and does the contract call for a group payment covering all those employees, through the employer, we will say, by a deduction, or through a union by a collection by the union of fees? DR. BAUM: It is a payroll deduction.

SENATOR MORSE: A payroll deduction. DR. BAUM: We have in Oregon a law permitting payroll deduction.

SENATOR MORSE: And that is the one form. DR. BAUM: Yes, sir.

SENATOR MORSE: You do not enter into an agreement, for example, with a union whereby the union agrees to pay? DR. BAUM: No.

SENATOR MORSE: And the second criticism that I have received, as you can well imagine, since you have received a great deal of correspondence, it seems to me to be coming from certain farm leaders. Some of them are in Marion County, to the effect that farmers are sort of let out of it. DR. BAUM: Yes.

SENATOR MORSE: They do not have a chance to come in under your plan. DR. BAUM: That is right.

SENATOR MORSE: Could the Grange or could the Farm Bureau or could the Farm Union enter into such a group arrangement with your service in Salem, for example? DR. BAUM: Yes, sir. That will come about. You see, the expansion of this plan and other plans in other states is moving with great rapidity. We were unfortunately hampered by the war. The Oregon Physicians Service, as I mentioned, started in 1942. We were faced with the necessity in Portland alone of insuring some 60,000 war workers. I think the Kaiser Shipyard had about 40,000. That was quite a burden to throw on a young organization, and we devoted most of our energies to care for those people. Now, with the war over and the shifting of these workers, as I mentioned, our energies have to be devoted to picking up the different types of contracts and enlarging them, which I feel we are now in a position to do very rapidly, to spread the plan. In fact, our goal in Oregon is to cover at least a half million people within the next two years, in the state of Oregon alone, about half the population.

SENATOR MORSE: In your testimony you pointed out that you think the largest unit should be a state unit, and you point out that in the state of Oregon these physicians services have come together in a state organization with the exception of four locals. First, would you be willing to say why those four locals have decided to date not to go into the organization and, second, to what extent, if any, does the failure of any local to come into a state organization create a handicap as to the operation of the state organization? DR. BAUM: The four locals have not come in for a variety of reasons. The principal one, I think, is that there has been no particular pressure put on them to bring them in. How it would be in the other states, I am not sure, but at least in Oregon the fact that these four locals remain separate offers us very little difficulty. If a statewide contract is to be written, and I mean by that a contract with some company that has employees in all parts of the state, the Oregon Physicians Service writes it and the physicians in the local group service it. The only thing the Oregon Physicians Service does not do is to come into a local area and write a contract for people living wholly in that area. I imagine that the principal reason, if I may speak frankly, that these particular locals have not come in is that they are located in industrial areas in Oregon, and it is possible under a contract of this character, by insuring a limited group of employees, in perhaps a saw mill, to net a higher return to the doctors in the way of fees in a specialized type of contract than they would receive from the total statewide pool, and I think that they stay out for that reason. They have their own contracts, which they think they can service better, and they think they can service the men properly, and there has been no particular pressure to bring them in, as I say.

SENATOR MORSE: Let us take a mill in an area of Salem. Take the Powers mill over there. There you are entering into a contract with the employees working for Fred Powers to service them. Do you make any examination of the individual employees prior to the letting of the contract? DR. BAUM: No, sir.

SENATOR MORSE: Suppose that half a dozen of them, we will say, have some chronic disease. They are covered nevertheless. You did not know it when you let the contracts. There is no saving clause there that denies them the right, even though they had the chronic disease before the contract was let? DR. BAUM: There is, in the present contracts, Senator Morse, but, as I stated, we expect to eliminate it. The saving clause is that we will treat any acute manifestation of a chronic disease, and the result is that if the man has a chronic illness, sooner or later he gets some manifestation, and we find ourselves treating it anyway.

SENATOR MORSE: Plus the fact that that is a source of administrative difficulty, and I suppose bad feeling? DR. BAUM: It is the source of most of our complaints, but there is no other limitation. They all come in.

SENATOR MORSE: Leaving the Oregon system alone for a moment, I think you are well qualified to give us an opinion on the so-called voluntary prepayment plans of the different types. That is where the plan is set up so that the individual householder, for example, can go in under a plan, although he is not one of a group of employees covered by it. I would like to get your opinion or criticism made of those plans. One that we have had presented to us many times before is that they are not of the maximum help to the prospective patient because it is human nature for him to wait too long to take out one of these policies, or contracts, until the disease or ailment is upon him, and he is not qualified under most of them. Is that a general criticism, do you find, of the prepayment plans by way of either insurance policies or contract agreements? DR. BAUM: I do not know how general it is, but it is a perfectly valid criticism, of course.

SENATOR MORSE: And therefore it is argued by the proponents of a bill such as S. 1606 that if the objective is really to try to do something about health on a national level we ought to have a system in which the failure to get the protection is not left to the exercise of the bad judgment on the part of the prospective patient. It should be, in other words, a blanket arrangement whereby whether he waits too long or not he will be covered the moment his disease becomes known. DR. BAUM: I should like very much to see that in operation. If there were any way to separate the good features of compulsion from the bad features not only in medicine but everything we do we would like to force people to take good care of their children. I would. To see that they are properly fed and clothed. I would like to force every school board in the United States to put good lighting in school houses. I am interested in eyes. That is my specialty. There are many things I would like to do, but it is my understanding that when you try to regulate the lives of people to force them to do this and that you are getting into difficulty. If we can evolve a method whereby every individual in the United States can be compelled to take proper precautions under any means you wish that is satisfactory to safeguard first, his health and, secondly, to safeguard this danger I mentioned of economic disaster from expensive illness, I am highly in favor of it.

SENATOR MORSE: That is what I call an answer right on the nose. One more and I am through. One other criticism that we hear is that under these voluntary plans there still are a good many individuals that really cannot afford to pay. They cannot afford whatever it adds up to the family, say $50 or $60 a year, which I think is the cost of a good many of them. We still have a good many people that cannot afford that, and because they think they cannot afford it, and because they cannot afford it, that is one reason why they just do not do anything about it, and their bad health then becomes a community liability. What is the answer, in your opinion, to the criticism that apparently under any voluntary system we are always going to have a rather large number of people that cannot pay for the cost?

DR. BAUM: I do not know where to draw the line between the indigent, frankly the charity case. We generally discuss them, but I do not know where to draw the line between the indigent case and the individual who can pay. Under present wage scales, it seems to me the majority of the employed people could pay this $50 a year you mentioned and pay it rather easily. Somewhere down the line there will have to be defined a form of assistance for those to pay who are unable to do so. Frankly, I have not yet been able to figure out the proper method of doing that. And then of course the indigent must be cared for,

and it is my opinion, although I do not care to get into that discussion, that a very good form of care for the indigent is for some one in Oregon, for example, the State Welfare Commission, to enter into such a contract as this with the Oregon Physicians Service to care for the indigent, the state to pay the bill. That could be done very well in a state like Oregon.

SENATOR DONNELL: On the last page of your testimony you point out what I might term as I understand your view that this bill, S. 1606, amounts to the United States government selling short physicians' services which it has no power to obtain and, because of the fact that it requires more services than can be given, selling short services that it cannot obtain. As I understand it, your position is this. If I am wrong, I wish you would check me on it. First, that under this bill it is planned that the taxpayers will finance this compulsory health insurance program. They put their money in. That is point number 1. DR. BAUM: I assume that is the method of payment, yes.

SENATOR DONNELL: Regardless of whether it comes from general taxation or a payroll tax, it is going to be paid for by the taxpayers of our country in some way? That is correct, is it not? DR. BAUM: That is correct.

SENATOR DONNELL: In the second place, you take the view that S. 1606 "obligates the federal government to deliver complete medical service to every individual for every illness and encourages people to believe that they can obtain this service." That is your construction of the bill, is it not? DR. BAUM: Yes, sir.

SENATOR DONNELL: In the first place, as I understand it from your next sentence, you say "Such obligation is impossible of fulfilment for the simple reason that there is not a sufficient number of doctors in the United States to do that amount of work." That is your third point? DR. BAUM: That is my opinion.

SENATOR DONNELL: And in addition to that you take the view, as you stated, that the government is contracting to furnish the service under conditions not of the physician's own choosing and against the will of the majority? That is your opinion too? DR. BAUM: I believe that the majority of the physicians are opposed to this bill.

SENATOR DONNELL: In other words, as I interpret your testimony, and I think it is an excellent point, you are saying that if we pass this law we are going to receive the money from the taxpayers, we are going to make a contract or obligation to deliver to the taxpayer services that in the first place the physicians do not want to furnish under this kind of plan; in the second place, the services cannot be in any way in the world compelled to be furnished if the doctors do not want to furnish them, and in the third place services in a quantity which, because of the lack of sufficient doctors, is impossible for the United States to furnish. Is that a correct analysis of your position? DR. BAUM: That is correct, Senator. I would like to add one remark. SENATOR DONNELL: Yes? DR. BAUM: When I say there are not sufficient doctors to do that amount of work, I mean, of course, that there are not enough doctors to deliver that amount of practice and maintain a high standard of medical service. SENATOR DONNELL: Yes. DR. BAUM: You can, of course, see that number of people if you are not particular how rapidly you see them.

SENATOR DONNELL: But it has been repeatedly emphasized by the chairman of the committee that the purpose of this bill is to provide high quality of medical service, and, as I understand it, your view is that this bill is contracting to do more than the government will have it in its power to do with the present supply of doctors. That is correct, is it not? DR. BAUM: That is correct and one of the chief reasons why you are getting a lowering of standards and quality of medical care. The doctors will try. If people appear in your office you have to try to take care of them. The doctors will try to take care of these people.

SENATOR DONNELL: Take this supposition: Suppose the doctors of this country should take the view that they are not going in on this system? Suppose they take that view. There is no way in the world that this bill compels them to, and there is no way to compel them to furnish those services by law. That is correct, is it not? DR. BAUM: That is correct. I cannot imagine the doctors taking that stand.

SENATOR DONNELL: I am coming to that next. I think the illustration, namely that this bill is selling short in quantities that under existing provisions of doctors it is impossible for the government to furnish on a high standard of efficiency, that is your position? DR. BAUM: That is what I said.

SENATOR DONNELL: I think that point is well worth considering, and I think you have rendered a very fine service in pointing it out so clearly.

SENATOR MORSE: May I suggest to the Senator from Missouri that the pattern of the day would be to put them in uniform. DR. BAUM: I just got out, Senator.

SENATOR MURRAY: Doctor, you say that under this plan it would be impossible for the plan to furnish the kind of medical care and treatment we are talking about here to the people of the country who would need it? DR. BAUM: Yes, sir.

SENATOR MURRAY: So you feel, then, that we should not attempt to provide any plan or any national plan of this kind at all but should depend entirely on the development of the voluntary systems throughout the country? DR. BAUM: I feel, as I stated before, that one single state is the largest unit that can operate a medical plan efficiently and be efficient. I include all these fields I mentioned. There are certain reasons, because the state is a political unit, there are certain reasons why it is necessary to have a single plan to cover one state. It has been my observation that as the operation increases in size its efficiency does not increase but, rather, goes the other way.

SENATOR MURRAY: That was discussed here the other day at length by the doctor from the New York Academy of Medicine. But there is no plan now in operation which gives statewide medical care; is there? DR. BAUM: Plans are being formed, I am told, in thirty-eight states now which will cooperate under the Associated Medical Care Plans. Now they will be different types of plans, not all as complete as Oregon's, but I think they can evolve rapidly.

(Dr. Baum was questioned in detail on the operation of the Oregon plan.)

DR. BAUM: Once you have a rather small number of people covered, we will say 1,000, and certainly not over 5,000, you find when you make it from five to ten thousand it is not any cheaper. When you go from ten to fifty thousand it is still no cheaper, and that broadening of the base on which you have your first relatively small group does not seem to lower the cost at all. As a matter of fact, it goes the other way, and the costs go higher, and I can tell you why if you want to go into details.

SENATOR MURRAY: I have always understood that under the insurance system the broad coverage is what made the fees lower to belong to the system. If they had a limited number, as in fire insurance, even if they did not have a broad coverage all over the country or all over the state, if the operation was in a state it would be kind of risky business, but by having a great many people insured at the same time the prospects are they would be able to furnish the insurance at a lower rate.

SENATOR CORDON: Senator, might I suggest what perhaps is a little inaccuracy in your statement?

SENATOR MURRAY: I would be glad to have it.

SENATOR CORDON: The analogy that occurs to me is that that is not quite proper for the reason that in insurance the amount of risk varies from a few hundred dollars to perhaps hundreds of thousands of dollars on a single risk, with the result that there must be a far broader coverage in order to minimize the cost of the incidental or single losses, whereas in this type of health coverage the total for any is limited in its amount, with the result that the average necessary to determine the overall perhaps could be cut down, as the doctor suggests, to one thousand or at least not over five thousand, and give you the complete operation of the law of averages.

SENATOR MURRAY: You state that you never considered your plan as an insurance plan but a contract practice plan. Is that true?

DR. BAUM: Yes, sir. Of course, I do not want to be placed in the position of having to define insurance. The point I wanted to bring out was that to me, when you insure, such as a house, you have first an insurable equity, and then you receive an indemnity if it is damaged; that is, you are paid in money, whereas under this plan and S. 1606 such is not the case. The individual does not receive an indemnity. Rather, an agreement is entered into, and I suppose any insurance is a contract, after all, but this contract we enter into, either the Oregon Physicians Service or Senate bill 1606, this agreement is one to supply medical service when it is needed, and that is contract practice, and contract practice has gone on for hundreds of years, and that is why I wish to emphasize that.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

COLORADO

Grants for Research.—More than $20,000 in gifts and grants were presented to the University of Colorado School of Medicine, Denver, recently. The contributions include an anonymous gift of $10,000 to increase the facilities of the medical school for research in industrial hygiene and two research grants from the National Institute of Health. One of these, a grant of $4,550, was awarded to Dr. Henry Swan, assistant professor of surgery in the medical school, for an investigation entitled "The Pathological Physiology and Surgical Therapy of Mitral Stenosis." Dr. Richard F. Thompson, professor and head of the department of bacteriology, received the other grant of $5,000 for "A Study of Antibody Production in Corneal Connective Tissue." The medical school also received $525 from the Life Insurance Medical Research Fund to help finance the tabulation of data obtained as a result of an investigation of rheumatic fever and rheumatic heart disease among children residing in Colorado areas over 9,000 feet. Two thousand dollars was contributed to the medical student loan fund of the school of medicine from the estate of the late Dr. John A. McCaw, Denver.

FLORIDA

State Medical Election.—Dr. William C. Thomas, Gainesville, was named president-elect of the Florida Medical Association at its meeting in Jacksonville recently, and Dr. Shaler A. Richardson, Jacksonville, who served for two years as president-elect, was inducted into the presidency. Vice presidents are Drs. Edwin C. Swift, Jacksonville, John W. Snyder, Miami, and James B. Parramore, Key West. Dr. Robert B. McIver, Jacksonville, was reelected secretary-treasurer.

Graduate Short Course.—The fourteenth annual graduate short course of the Florida Medical Association was held at the George Washington Hotel, Jacksonville, June 17-30. The faculty included:

Dr. William A. Sodeman, professor and head of the department of preventive medicine, Tulane University of Louisiana School of Medicine, New Orleans, medicine.

Dr. Joseph Yampolsky, associate professor of pediatrics, Emory University School of Medicine, Atlanta, Ga., pediatrics.

Dr. William F. Rienhoff Jr., associate professor of surgery, Johns Hopkins University School of Medicine, Baltimore, surgery.

Dr. Samuel A. Cosgrove, clinical professor of obstetrics, Columbia University College of Physicians and Surgeons, New York, obstetrics.

Sr. Asst. Surg. John C. Cutler, Venereal Disease Research Laboratory, U. S. Public Health Service, venereal disease.

Dr. Edwin C. Hamblen, clinical professor of endocrinology and associate professor of obstetrics and gynecology, Duke University School of Medicine, Durham, N. C., gynecology.

GEORGIA

Personal.—Dr. Trawick H. Stubbs, Atlanta, was recently appointed assistant dean of Emory University School of Medicine, Atlanta.——Dr. Thomas H. Clark, Douglas, a member of the Georgia State Board of Medical Examiners for three years, has been elected president.

Physician Honored.—Dr. Clair A. Henderson has been awarded the 1945 Lucas trophy for having done the most worth while thing during the year for Savannah, where he is currently serving as city and Chatham County health officer. He was selected for leadership of Savannah in the unprecedented campaign against tuberculosis and venereal disease, which saw 71,149 persons voluntarily submit to chest x-rays and blood tests in a forty-five day period last fall.

IDAHO

State Medical Election.—Dr. Albert B. Pappenhagen, Orofino, was chosen president-elect of the Idaho State Medical Association at its recent meeting and Dr. George C. Halley, Twin Falls, was elevated to the presidency. Dr. William B. Handford, Caldwell, is the secretary-treasurer.

ILLINOIS

Tuberculosis Sanatoriums.—Mount Vernon and Savanna have been selected for the locations of two of the state tuberculosis sanatoriums authorized by the general assembly at the last regular session. The legislature authorized the construction of five sanatoriums, specifying that one should be located in Cook County and four down state.

Chicago

Faculty Appointments.—Dr. Walter G. Maddock and Dr. Bertha A. Klien have been appointed associate professors of surgery and ophthalmology respectively at Northwestern University Medical School. Dr. Maddock was recently released from military service, and Dr. Klien has been serving as associate professor of ophthalmology at the University of Illinois College of Medicine.

The Weissman Medical Research Foundation.—The Dr. Leonard H. and Louis Weissman Medical Research Foundation was recently organized to perpetuate the memory of Dr. Leonard H. Weissman, formerly assistant administration officer of the Cook County Hospital, and his brother Louis Weissman, both of whom were killed in airplane accidents over Germany during World War II. The funds that are collected by the group organizing and carrying on this corporation, which is organized as a nonprofit corporation under the laws of the state of Illinois, are to be used for medical research. The foundation is closely connected and allied with the Hektoen Institute. On June 26 the foundation donated $5,000 to the Hektoen Institute to be used for medical research on rheumatic heart fever. Dr. Weissman's obituary appeared in THE JOURNAL July 13, page 934.

INDIANA

Yellow Fever Hero Dies.—John R. Kissinger, one of the original group of 23 men who voluntarily were inoculated with yellow fever in the Walter Reed experiments of 1900-1901, died in Clearwater, Fla., July 14, aged 68.

KENTUCKY

Personal.—Dr. Wallace E. Rich, Danville, has been appointed acting superintendent of the Kentucky State Hospital near Danville. The institution was recently returned to the state by the army.——Dr. Gradie R. Rowntree, deputy director of health, Louisville and Jefferson County Health Department and associate professor of public health, University of Louisville School of Medicine, has been given a leave of absence to do postgraduate work in public health administration and in general medicine at Columbia University,

MINNESOTA

State Medical Election.—Dr. Louis A. Buie, Rochester, was elected president of the Minnesota State Medical Association at its meeting in May. Other officers include Drs. Carl B. Drake, St. Paul, and Lawrence R. Gowan, Duluth, vice presidents, Dr. Benjamin B. Souster, St. Paul, secretary and Dr. William H. Condit, Minneapolis, treasurer. A total of 1,852 physicians attended, 1,653 of them being Minnesota physicians.

"Internationally Known Health Lecturer" Sought for Arrest.—On June 8 a complaint was filed in the municipal court of Minneapolis charging Leon A. Sceblo, alias Dr. Leonid De Seblo, who gave his home address as Los Angeles, with practicing healing in violation of the Minnesota basic science law. The Minneapolis police department is now attempting to serve a warrant. Sceblo mailed postal cards from Minneapolis representing himself as being a doctor and an authority on "craniopathy, endocrine glands, old age, diet and nutrition, cosmic rays" and so on. The postal card also represented that the defendant was an authority on the pituitary, pineal and thalamic glands and was able to advise the public on "how to avoid insanity, inferiority complex, subnormal mental states, nervous ailments, eye trouble, rheumatism, high blood pressure, heart, skin and all other mental and physical disorders." The postal cards also announced that Sceblo would give two lectures April 11 and 12 in Minneapolis. Representatives of the Minnesota State Board of Medical Examiners and the Minneapolis Police Department were present at Sceblo's lecture on April 12, during which lecture Sceblo discussed vitamins, craniopathy, cosmic rays and other matters. He also announced that he would conduct a health course lasting three days and the cost would be $25 per individual. At the conclusion of the lecture he was instructed to report to headquarters of the Minneapolis police department the following morning at 9 o'clock. He failed to make his appearance, and subsequent investigation

disclosed that he checked out of the hotel at about 7 a. m. April 13. Sceblo also admitted that he had no license to practice any form of healing and that he had never obtained a degree in medicine or any other legally recognized branch of the healing arts.

NEW YORK

Oliver Jones Named Assistant Dean.—Oliver P. Jones, Ph.D., professor and head of the department of anatomy, University of Buffalo School of Medicine, has been appointed assistant dean, it was announced June 26.

Committee to Study Need of State University.—Dr. George H. Whipple, dean of the University of Rochester School of Medicine and Dentistry, Rochester, has been named to a thirty member commission to study the need for a state university. The commission, which has an appropriation of $100,000, was authorized by the 1946 session of the legislature.

Personal.—Dr. Francis E. Fronczak, Buffalo, has been elected a retired member of the Medical Society of the State of New York.——Dr. William S. McCann, head of the department of medicine at the University of Rochester School of Medicine and Dentistry, has been appointed vice chairman of the American Board of Internal Medicine. He also has been appointed a member of the board of regents of the American College of Physicians, Philadelphia, for a term of three years.——Dr. Homer L. Lawder, formerly of Jerseyville, Ill., has been appointed professor of hygiene, college physician and director of the student health section, Union College, Schenectady.——Dr. James H. Wall, assistant medical director for the past ten years of the New York Hospital, Westchester division, White Plains, has been appointed medical director to succeed Dr. Clarence O. Cheney, who has retired, effective July 1.—— Mr. George L. Cantzlaar, Brooklyn, has been appointed director of publications and public relations for the New York State department of mental hygiene.

New York City

Personal.—Dr. Haven Emerson has been appointed adviser to the New York Study of Child Health Services, which is a part of the nationwide study of child health services being conducted by the American Academy of Pediatrics. Dr. George M. Wheatley is director of the local study.——Dr. George L. Wolcott has returned to his position as medical director of the Charles H. Phillips Company Division of Sterling Drug Inc. after serving with the Army Medical Corps for three and a half years. Dr. Wolcott reached the rank of major before receiving his discharge.

La Guardia Health Plan Is Inaugurated.—The Health Insurance Plan of Greater New York was to be launched during the week of July 15 with the beginning of a campaign to enroll at least 100,000 city employees and their families representing a total of 250,000 persons. The plan, first proposed by former Mayor Fiorello H. La Guardia in a broadcast from City Hall on April 23, 1944, provides for comprehensive medical and surgical services for all persons living or working in New York City and earning up to $5,000 a year and contemplates that the employer will pay at least 50 per cent of employee premiums (THE JOURNAL, May 13, 1944, p. 161; Dec. 2, 1944, p. 906). The plan as first conceived called for a premium of about 4 per cent of the annual pay of the insured, but that proposal struck a legal snag, and the contract as approved now provides for an annual premium of $29 for a single person, one of $58 for a married employee and his wife and one of $87 for employees with families of three or more persons. The benefits of the plan include routine medical services, at home, at doctors' offices or in hospitals. Diagnosis, treatment, surgical operation and all other kinds of medical treatment, including the services of specialists, are embraced in the plan, but it does not cover hospitalization. About twenty-five groups or "teams" of physicians are reported to be under contract to provide the services covered by the plan, with many more soon to be signed. Each group is to be composed of general practitioners, surgeons and specialists in various fields of medicine. The Health Insurance Plan of New York is a nonprofit corporation whose board of directors represents a cross section of the city's public, labor, business, commercial and industrial organizations.

NORTH CAROLINA

James Bullit Retires.—Faculty members of the University of North Carolina School of Medicine, Chapel Hill, gave a dinner to Dr. James B. Bullit, June 5, to mark his retirement as professor of pathology and head of the department, ending thirty-three years' service to the university.

NORTH DAKOTA

George Campana Resigns as Health Officer.—Dr. George F. Campana, Bismarck, has resigned as health officer of North Dakota, effective July 20. Newspaper reports indicate that Dr. Campana plans to enter private practice in Brooklyn. Dr. Campana joined the state health department as director of the division of preventable disease in June 1943, becoming state health officer the following year.

OKLAHOMA

State Medical Election.—Dr. Paul B. Champlin, Enid, was named president-elect of the Oklahoma State Medical Association at its meeting May 3, and Dr. Louis C. Kuyrkendall, McAlester, was installed as president. Dr. Roy E. Emanuel, Chickasha, is the newly elected vice president.

Conference on Exceptional Children.—A conference on exceptional children was held at the University of Oklahoma, Norman, July 9-11. Principal speakers were:

Leo F. Cain, Norman, The Organization of the Conference.
Elise H. Martens, Washington, D. C., Changing Concepts in the Education of Exceptional Children.
Miss May Bryne, Minneapolis, The Place of the Classroom Teacher in a Program for Exceptional Children.
Dr. John J. Lee, Detroit, The Place of Mental Hygiene in the Education of Exceptional Children.
Harry J. Baker, Ph.D., Detroit, The Function of the Psychological Clinic in a Program for Exceptional Children.

The state of Oklahoma has provided legislation which will permit establishment of programs of special education in local school districts. In order to stimulate interest in this aspect of public education the University of Oklahoma is sponsoring this conference to discuss the problems of educating exceptional children, including the physically handicapped, the mentally inferior and superior and behavior deviates.

PENNSYLVANIA

Special Society Election.—At a recent meeting of the Pennsylvania Academy of Ophthalmology and Otolaryngology Dr. Thomas F. Furlong Jr., Ardmore, was elected president. Among other officers are Dr. Benjamin F. Souders, Reading, secretary, and Dr. William E. Grove, Johnstown, treasurer. The 1947 meeting of the society will be at the Hotel Hershey, Hershey, in April.

Personal.—Dr. Paul B. Dunn, Mahoney, completed fifty years in the practice of medicine on June 25.——Dr. Royal H. McCutcheon, Bethlehem, has been named president of the Pennsylvania Tuberculosis Society, succeeding Dr. Charles H. Marcy, Pittsburgh, who held the office for four years.——Dr. John J. Corrigan, Hazelton, was recently presented with a gold watch by the Lower Luzerne County Medical Society in recognition of his completion of fifty years in the practice of medicine.

Philadelphia

News of Woman's Medical College.—Marion S. Fay, Ph.D., who has been acting dean of the Woman's Medical College of Pennsylvania, was appointed dean at a recent meeting of the board of corporators. Dr. Louise Pearce, Belle Mead, N. J., associate member of the Rockefeller Institute, was elected president of the college, and Dr. Hubley R. Owen, director of medical services for the school district of Philadelphia, was chosen vice president and director of the expansion program of the college. Dr. Catharine MacFarlane, research professor of gynecology at the college, and Mrs. J. S. C. Harvey, a member of the board of corporators for more than twenty-five years, were also chosen vice presidents. New members of the board are Florence B. Seibert, Ph.D., associate professor of biochemistry, Henry Phipps Institute, and Dr. John S. Rodman, emeritus professor of surgery at the medical college. Ex officio members chosen are Mrs. William P. Dickson, president of the board of managers of the Woman's Hospital of Philadelphia, and Dr. Helen Johnstone, the president of the American Medical Women's Association. Dr. Catherine B. Hess, formerly of Harrisburg, has been made medical director of the college.

RHODE ISLAND

Personal.—Mr. Oliver G. Pratt, director of the Salem Hospital, Salem, Mass., has been appointed executive director and superintendent of the Rhode Island Hospital, Providence.

State Medical Election—Joseph Stokes Honored.—Dr. Michael H. Scanlon, Westerly, was named president-elect of the Rhode Island Medical Society at its meeting in May. Dr. Herman C. Pitts, Providence, was installed as president. Dr. Morgan Cutts, Providence, is the new secretary, succeeding Dr. William P. Buffum, Providence, who retired from the

position after holding it for five years, to become chairman for Rhode Island of the American Academy of Pediatrics. Mr. John E. Ferrell is the executive secretary of the society. The 1947 annual meeting will be held in Providence, May 14-15. Dr. Joseph Stokes Jr., Philadelphia, was presented with the Dr. Charles V. Chapin Medical Award during the recent meeting after he had delivered the annual Chapin Oration before the medical society. The memorial award is given by the city of Providence, and the recent presentation was made by Dennis J. Roberts, mayor of the city. The award and the oration honor the late Dr. Chapin, who was superintendent of health of Providence for forty-eight years.

Institute of Pathology Created.—The Rhode Island Hospital has established an Institute of Pathology to make available pathologic and clinical laboratory service to other and especially smaller hospitals throughout the state. The project was developed by Dr. Benjamin E. Clarke, Providence, director of the department of pathology, and Oliver G. Pratt, executive director of the hospital. The institute offers the following to participating hospitals:

Attendance of an institute pathologist at clinical-pathologic conferences, tumor clinics and any other such scientific meetings as those hospitals participating in the plan may wish to arrange through their own medical staffs.

The daily processing of surgical specimens with complete pathologic reports. The installation of a new autotechnicon has greatly speeded up this service.

A detailed service, by appointment, for immediate pathologic study, with frozen section, if necessary, at time of operation in cases suspected of being cancer, as arrangements are made by participating hospitals in accordance with their particularized needs.

The performance of necropsies in the pathologic departments of the affiliated hospitals, with processing of microscopic preparations from necropsy material at the institute.

A carefully planned system of resident refresher courses for technicians, to be held in the Rhode Island Hospital, with the provision by it of substitute technicians to serve the affiliated hospitals during the absence of their technicians receiving the educational training.

Supervision of clinical laboratory work at the affiliated hospitals by the biochemist and bacteriologist of the institute, with unusual and complicated chemical and bacteriologic procedures conducted at the laboratories of the Rhode Island Hospital.

A complete educational program is anticipated which will include the preparation of young men for national board certification, a school for technologists, professional staff meetings, regional and state conferences, participation in specialized clinics, the teaching of interns and residents and, perhaps, of nurses, and an "ever expanding acceptance of educational challenges within the institute's scope of operation." It also has been suggested that laboratory service might be offered to individual physicians. In addition to the pathologist director, the staff is expected to include at least four assistant pathologists, with one specializing in neuropathology and one specializing in the pathology of blood forming organs and hematology, a bacteriologist and a biochemist, all assisted by technicians. Research is to be emphasized in all fields of work. THE JOURNAL, May 26, 1945, page 301, announced the project when it was proposed.

TEXAS

Free Diagnostic Center.—The Baylor Free Diagnostic Center has been established at Baylor University Hospital, Dallas, to serve patients unable to pay from throughout the Southwest. The center will also be a nucleus for the teaching program of the university.

Grants to Texas Medical Branch.—Smith, Kline and French of Philadelphia have given a grant of $5,000 to the University of Texas Medical Branch, Galveston, for the support of studies on hypertension conducted under the direction of Dr. Eric Ogden, professor of physiology. J. P. Roerig and Company of Chicago have given a grant of $5,000 to the university for the support of special cytologic studies under the direction of Charles M. Pomerat, Ph.D., professor of anatomy and director of the Tissue Culture Laboratory. With the support of the William Buchanan Foundation of Texarkana, a special study is to be made in the department of pediatrics of the University of Texas Medical Branch, Galveston, of the control of infant diarrhea. Dr. Daniel C. Darrow, professor of pediatrics at Yale University School of Medicine, New Haven, will be a special research investigator in connection with the study during the summer months. The research effort is under the direction of Dr. Arild E. Hansen, professor of pediatrics and director of the child health program, University of Texas Medical Branch. Through the cooperation of the state department and the U. S. Public Health Service, two physicians from Syria are taking special postgraduate work at the University of Texas Medical Branch. Dr. Fayek Nahass has been given a special postgraduate fellowship in neuropsychiatry under the direction of Dr. Jack R. Ewalt, professor of neuropsychiatry and director of the State Psychopathic Hospital, while Dr. Mukhtar Wasfi holds a similar position in radiology under the direction of Dr. Martin Schneider, chairman of the department of radiology.

VIRGINIA

Changes in the Faculty at Virginia Medical College.—New appointments to the Medical College of Virginia, Richmond, include Dr. Randall L. Thompson, associate professor of bacteriology and parasitology; Dr. William A. Summers, assistant professor of bacteriology and parasitology; Dr. Charles E. Troland, assistant professor of neurologic surgery; Dr. Delbert V. Kechele, assistant professor of radiology; Miss Margaret Denniston, associate professor of nursing; Dr. Tom W. Hodges, assistant professor of orthopedic surgery. Among the promotions on the faculty are:

Dr. Thomas N. Barnett to associate professor of clinical medicine.
Dr. Nathan Bloom to associate professor of medicine.
Erling S. Hegre, Ph.D., to associate professor of anatomy.
Dr. Guy W. Horsley to associate professor of surgery.
Roscoe D. Hughes, Ph.D., to professor of biology.
Dr. William R. Jordan to assistant professor of clinical medicine.
Karl L. Kaufman, Ph.D., to professor of pharmacy.
Paul S. Larson, Ph.D., to associate professor of research pharmacology.
Dr. James T. Tucker to associate professor of orthopedic surgery.
Dr. Harry Walker to professor of clinical medicine.
Jesse H. Weatherby, Ph.D., to associate professor of research pharmacology.
Dr. George Z. Williams to professor of pathology.
Dr. John P. Williams to professor of clinical medicine.
Dr. Washington C. Winn to associate professor of obstetrics.

WEST VIRGINIA

Bruce Pollock Resigns.—Dr. Bruce H. Pollock, Southside, has resigned as deputy state health commissioner, effective July 19, to become chief of the outpatient service for the Veterans Administration at Huntington, with offices at the Veterans Hospital there. Dr. Pollock was appointed deputy health commissioner on his release from the navy medical corps in October 1945. Prior to entering the naval service in 1941 he served as director of the bureau of county health work in the state health department.

New Policy for Care of Young Mentally Ill.—Under a new policy adopted by the state board of control, all mental patients 16 years of age and under will be transferred to the Huntington State Hospital from the mental institutions at Weston and Spencer. The new plan also provides for the transfer of all tuberculous and criminally insane inmates from Huntington and Spencer to the hospital at Weston. Patients listed as feebleminded will be segregated and sent to the Barboursville unit of the Huntington Hospital. Over 80 young patients will be transferred from Weston and 10 from the Spencer Hospital to Huntington, where facilities are much better for the care of children.

Resolution Urges Medical School.—The Kanawha Valley Labor Union has gone on record in favor of the establishment of a West Virginia University Medical College in connection with the New Memorial Hospital at Charleston. In a resolution adopted at a meeting held June 17, suggestion was made to the governor that such a medical school be made a part of the new hospital when it is constructed because "at present there are no facilities in the state of West Virginia whereby one can complete the requirements for a medical degree, and boys and girls who desire to become physicians are compelled to finish their work beyond the borders of the state." Copies of the resolution recommending the establishment of the college as part of or in connection with the hospital were mailed to Governor Clarence W. Meadows, members of the board of control and the state board of education, the board of governors of West Virginia University and all candidates for the house of delegates and state senate at the primary which will be held in August.

HAWAII

Health Department News.—Dr. William R. Murlin, U. S. Public Health Service, once acting director of the division of tuberculosis control, Oregon State Department of Health, Portland, has been named survey physician of the tuberculosis bureau of the Board of Health of Hawaii.——Dr. Barbara A. Hewell, assistant director of the division of research in child development, U. S. Children's Bureau, Washington, D. C., has been appointed assistant director of the bureau of maternal and child health and crippled children for the territorial board.

PUERTO RICO

Industrial Hospital.—The State Insurance Fund of Puerto Rico will invest the sum of $1,400,000 in the construction of a modern industrial hospital, consisting of 350 beds, with a dormitory of 100 additional beds for physical rehabilitation cases, according to act number 388 approved by the governor on April 22. The law provides that this hospital shall be devoted to the care of medical and surgical cases, with particular emphasis on rehabilitation of disabled workers. The sum of $1,400,000 is appropriated by this act for the construction of a 350 bed hospital, purchase of equipment and furniture, and preparation of plans and specifications. The sum of $200,000 is allocated for the construction of the 100 bed dormitory. Purchase of land and other expenses will be paid with an additional appropriation of $160,000.

Hospital Building Program.—If the federal aid-to-hospitals act is passed by Congress, the Department of Health of Puerto Rico will have allocations of funds amounting to $5,000,000 for the construction of hospitals in the island. Of this amount the insular legislature has already passed appropriations amounting to $2,100,000 for the Ponce District Hospital and $1,000,000 to be divided in equal parts for improvements and enlargement of the Insular Insane Asylum and the Rio Piedras Sanatorium, according to Dr. Antonio Fernos Isern, commissioner of health. Dr. Fernos Isern is reported to have stated that the insular legislature voted appropriations sufficient to continue the construction of municipal hospitals and medical health centers in the urban and rural areas of Puerto Rico. The department of health, with the cooperation of the committee on design of public works and the department of the interior, submitted this program last year.

GENERAL

College of Surgeons Transfers Meeting to Cleveland.—The American College of Surgeons will hold its clinical congress at the Cleveland Public Auditorium, Cleveland, December 16-20, it was announced July 22. Because the United Nations Assembly caused a shortage of hotel accommodations in New York, where the session was to be held September 9-13, the change was made. Headquarters of the American College of Surgeons are at 40 East Erie Street, Chicago.

Group Formed for Better Living.—The American International Association for Economic and Social Development has been organized to promote better living standards in various countries through international cooperation, according to an announcement in the New York *Times*, July 4, by Nelson A. Rockefeller, president and founder. Offices of the new association, which will encourage practical programs of international cooperation in agriculture, public health, literacy and industry, will be at 30 Rockefeller Plaza, New York.

Lasker Awards Established.—The Albert B. and Mary Lasker Foundation has established, through the medium of the American Public Health Association, a series of annual awards for outstanding achievements by individuals or by health or welfare agencies in research and in the administrative application of research, with special reference to those diseases which are the major causes of death, namely of the heart and arteries, of cancer, of rheumatism and arthritis and other diseases high on the mortality and morbidity lists. The objective of the awards also includes the prevention of these diseases, their treatment and their most effective care. The Lasker Foundation will make available to the association four annual gifts of $1,000 each and a commemorative statuette for each recipient. For an especially important contribution, on the level with that of the discovery of penicillin, the Lasker Foundation proposes an additional award of $2,500. To carry out the project the executive board has appointed a committee on awards consisting of:

Dr. George Baehr, New York, chairman.
Dr. Thomas Francis Jr., Ann Arbor, Mich.
Dr. Hugh R. Leavell, New York.
Dr. Robert F. Loeb, New York.
Dr. Karl F. Meyer, San Francisco.
Dr. Thomas Parran, Washington, D. C.
Dr. Alfred N. Richards, Philadelphia.
Dr. James S. Simmons, Washington, D. C.
Dr. Ernest L. Stebbins, Baltimore.

The committee has full authority to determine the particular fields in which awards will be given in any year. It is empowered to withhold awards entirely if no research projects in any year in the chosen area are, in its opinion, worthy of recognition. The areas of interest in which the awards for 1946 will be made are now being defined by the committee and will shortly be announced. It is understood that the contributions of health and welfare agencies and of individuals will be equally considered in the general program. Research related to clinical services or to the distribution of clinical services to the public will receive primary recognition, but administrative achievement and outstanding applications of facts already known will be honored as well.

U. S. P. Advisory Committee on Amino Acids.—At the request of officials of the American Medical Association and of the Food and Drug Administration and with the cooperation of medical nutritional experts and of the industry, the U. S. Pharmacopeia revision committee and board of trustees have just approved an advisory committee on amino acids. This committee will cooperate with all groups interested in amino acids, protein hydrolysates and related medicinal products in the development of adequate standards. When proper standards are available both oral and parenteral products of this type will find a place in the Pharmacopeia. The advisory committee plans the establishment of a number of research groups of experts to study the effects of these products on such processes as nitrogen balance, protein regeneration, toxicity and growth. From time to time U. S. Pharmacopeia open conferences on amino acids will be called, when all who are interested will be invited.

Prevalence of Poliomyelitis.—Reports of cases of poliomyelitis for the periods indicated have been received from the division of public health methods, U. S. Public Health Service, as follows:

Division and State	July 13, 1946	July 14, 1945	Median, 1941-45	Total to July 13, 1946	Cor. Period, 1945
New England States:					
Maine	0	1	1	3	10
New Hampshire	4	0	0	7	3
Vermont	0	1	0	7	5
Massachusetts	0	2	2	8	20
Rhode Island	0	0	0	0	1
Connecticut	4	4	2	19	22
Middle Atlantic States:					
New York	15	29	11	128	257
New Jersey	6	23	1	27	58
Pennsylvania	1	4	4	33	27
East North Central States:					
Ohio	13	10	3	60	57
Indiana	3	1	1	21	23
Illinois	23	4	6	102	32
Michigan	11	1	3	27	14
Wisconsin	4	1	0	20	9
West North Central States:					
Minnesota	40	0	1	81	9
Iowa	8	1	2	43	8
Missouri	14	1	1	49	23
North Dakota	1	0	0	4	6
South Dakota	5	0	0	8	1
Nebraska	12	0	0	20	3
Kansas	18	5	3	55	12
South Atlantic States:					
Delaware	0	1	0	1	3
Maryland	3	3	1	8	14
District of Columbia	1	6	0	2	11
Virginia	3	7	5	13	44
West Virginia	1	3	0	9	17
North Carolina	1	2	1	38	37
South Carolina	3	11	5	14	61
Georgia	3	8	8	49	38
Florida	24	1	2	338	30
East South Central States:					
Kentucky	5	0	10	29	18
Tennessee	1	27	5	23	72
Alabama	14	6	6	136	73
Mississippi	6	2	2	51	23
West South Central States:					
Arkansas	20	3	3	61	14
Louisiana	18	1	1	104	16
Oklahoma	15	8	1	64	34
Texas	54	45	13	391	357
Mountain States:					
Montana	6	0	0	30	4
Idaho	0	1	0	1	2
Wyoming	0	1	0	2	1
Colorado	31	1	1	135	9
New Mexico	1	0	0	17	5
Arizona	1	0	0	11	4
Utah	0	0	0	13	13
Nevada	0	0	0	0	0
Pacific States:					
Washington	5	5	2	63	35
Oregon	5	2	1	10	6
California	25	22	12	261	138
Total	428	254	254	2,596	1,679
28 weeks	2,596	1,679	1,626	2,596	1,679

CORRECTION

Naval Medical Consultants.—In an item with this title in Medicine and the War (THE JOURNAL, July 6, p. 831) the name of Dr. Edwin N. Broyles was misspelled.

Deaths

William Steinach ✠ New York; College of Physicians and Surgeons, medical department of Columbia College, New York, 1894; an Affiliate Fellow of the American Medical Association; at one time instructor in nervous diseases at the New York University Medical College and attending neurologist in the college clinic; at one time assistant physician at the Willard State Hospital; for many years affiliated with the City Hospital; psychiatrist in the U. S. Army to examine soldiers prior to going to France in 1917; died March 19, aged 74, of cerebral hemorrhage.

Eliot Alden ✠ Los Angeles; Harvard Medical School, Boston, 1901; at one time professor of clinical surgery at the College of Medical Evangelists; member of the founders group of the American Board of Surgery; fellow of the American College of Surgeons; served with distinction overseas during World War I; member of Appeal Board number 17 during World War II; consulting surgeon to the Veterans Administration Facility; on the staffs of the Children's, St. Vincent's and Hollywood hospitals; died April 19, aged 71.

Frank Clinton Anderson, Mount Vernon, Ohio; Ohio State University College of Medicine, Columbus, 1911; member of the American Medical Association; served during World War I; at one time health commissioner; for many years superintendent of the Ohio State Sanatorium; died in the Mercy Hospital March 12, aged 56, of acute myocardial failure and arteriosclerotic heart disease.

William B. Battle, Gallaway, Tenn.; University of Louisville (Ky.) Medical Department, 1879; died March 24, aged 90, of carcinoma.

Zenophile Beauchamp, Fitchburg, Mass.; School of Medicine and Surgery of Montreal, 1893; died April 1, aged 80.

Philip Bartow Bedingfield, Wrightsville, Ga.; University of Georgia Medical Department, Augusta, 1887; died March 15, aged 83, of heart disease.

George W. Beeghly, Dayton, Ohio; Medical College of Ohio, Cincinnati, 1898; died April 29, aged 83, of chronic myocardial insufficiency.

Ernst Bernhardt, Boston; Universität Leipzig Medizinische Fakultät, Saxony, Germany, 1912; died February 27, aged 61, of myocardial infarction.

Clarence Earnest Betts, San Antonio, Texas; Washington University School of Medicine, St. Louis, 1905; served on the staffs of the Santa Rosa, Medical Arts, Medical and Surgical Nix and Physicians and Surgeons hospitals; died April 22, aged 68, of coronary occlusion.

William H. Bishop, Elgin, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1877; served as health officer of St. Charles, where he was clerk of the school board; died in the Sherman Hospital April 23, aged 91, of pernicious anemia.

Hubert Berkley Blaydes, La Grange, Ky.; Kentucky University Medical Department, Louisville, 1903; member of the American Medical Association; affiliated with the State Reformatory Hospital; died in Winter Garden, Fla., recently, aged 69.

Lucius Cuthbert Brooker, Swansea, S. C.; Medical College of Georgia, Augusta, 1907; member of the American Medical Association; served one term in the state legislature; died in the South Carolina Baptist Hospital, Columbia, April 2, aged 64, of cerebral thrombosis.

Paul Aloysius Buckley, Chester, Pa.; Temple University School of Medicine, Philadelphia, 1929; member of the American Medical Association; on the staff of the Taylor Hospital, Ridley Park, where he died April 29, aged 43 of burns received when his clothing caught fire while smoking.

Arthur Leslie Carlton, Singer, La.; Kansas City Medical College, 1903; died March 20, aged 67, of emphysema of the lungs.

Thaddeus Wirt Carmichael, Rowland, N. C.; Kentucky University Medical Department, Louisville, 1904; member of the American Medical Association; died April 8, aged 71.

Robert William Chapman, Maplewood, N. J.; University of the City of New York Medical Department, 1891; for many years physician for Swift & Company; died April 14, aged 80, of arteriosclerosis.

James Chisholm, Seattle; McGill University Faculty of Medicine, Montreal, Que., Canada, 1900; member of the American Medical Association; died April 16, aged 73, of myocarditis.

John Eugene Church ✠ Lake Worth, Fla.; Detroit College of Medicine and Surgery, 1920; specialist certified by the American Board of Radiology; member of the Radiological Society of North America, Inc., and the American College of Radiology; past president of the Oakland County (Mich.) Medical Society; served on the staffs of St. Joseph Mercy and Pontiac General hospitals, Pontiac, Mich.; died in West Palm Beach April 26, aged 53, of perforated ulcer.

Oliver Parker Coe ✠ Cincinnati; Medical College of Ohio, Cincinnati, 1901; coroner of Hamilton County for two terms from 1904 to 1909; died April 6, aged 71, of cerebral thrombosis and arteriosclerosis.

Benjamin Franklin Collins, Claremore, Okla.; Chattanooga (Tenn.) Medical College, 1905; member of the American Medical Association; died in Alamo, March 1, aged 67, of coronary occlusion.

James Lloyd Collins ✠ Washington, D. C.; University of Kansas School of Medicine, Kansas City, 1928; specialist certified by the American Board of Surgery; fellow of the American College of Surgeons; served as clinical instructor in surgery at the George Washington University School of Medicine; on the staffs of the George Washington University and Gallinger Municipal hospitals; died in the Doctors Hospital March 23, aged 44 of coronary thrombosis.

John Fancher Crawford, Brooklyn; Long Island College Hospital, Brooklyn, 1903; also a graduate in pharmacy; past president of the Kings County Pediatric Society; medical member of local draft board number 27 during World War I; died April 27, aged 71, of chronic myocarditis.

Cornelius H. Cremer, Cashton, Wis.; Rush Medical College, Chicago, 1889; Kentucky School of Medicine, Louisville, 1890; member of the American Medical Association; past president of the state board of medical examiners; for many years a member of the school board; died April 25, aged 82, of coronary sclerosis.

Floyd McAlister Davis, Paris, Ill.; Louisville (Ky.) Medical College, 1889; died April 26, aged 79, of coronary occlusion and hypertensive heart disease.

James Park Edmonds ✠ Middlesboro, Ky.; Hospital College of Medicine, Louisville, 1898; died April 20, aged 72, of angina pectoris.

Floyd Irvin Eicher ✠ Wakarusa, Ind.; Indiana University School of Medicine, Indianapolis, 1916; past president of the Elkhart County Medical Society; served during World War I; deputy health officer of Wakarusa for many years; on the staff of the Elkhart (Ind.) General Hospital; died April 6, aged 60, of cerebral hemorrhage.

Albert Richard Ellison ✠ Buffalo; University of Buffalo School of Medicine, 1917; served on the staff of the Deaconess Hospital; died in Las Vegas, N. M., April 5, aged 53.

Frank Erdwurm, New York; Columbia University College of Physicians and Surgeons, New York, 1903; member of the American Medical Association; served as president of the board of visitors of the New York State Hospital at Ray Brook, N. Y.; died in Fort Lauderdale, Fla., April 26, aged 64.

Milton H. Everett, Bradenton, Fla.; Rush Medical College, Chicago, 1870; Jefferson Medical College of Philadelphia, 1885; formerly practiced in Lincoln, Neb.; died April 4, aged 99, as the result of injuries received in a fall.

Celus Gregory Ferebee, Morehead City, N. C.; Medical College of Virginia, Richmond, 1902; died March 2, aged 70.

W. H. Gum, Buckhannon, W. Va.; College of Physicians and Surgeons, Baltimore, 1897; died March 14, aged 77.

Arthur Paton Hanie, Hartwell, Ga.; Atlanta Medical College, 1891; member of the American Medical Association; died March 17, aged 77.

Crawford Clark Harwell, Los Angeles; Meharry Medical College, Nashville, Tenn., 1916; formerly on the faculty of his alma mater as assistant professor of clinical surgery; died March 28, aged 58.

James F. Hays, Augusta, Ark.; College of Physicians and Surgeons, Little Rock, 1907; member of the American Medical Association; served overseas during World War I; lieutenant colonel, medical reserve corps, U. S. Army, not on active duty; served as county health officer; died March 14, aged 71, of carcinoma of the rectum and colon.

Fernando C. Hedges, Judy, Ky.; Kentucky School of Medicine, Louisville, 1907; died in the Good Samaritan Hospital, Lexington, April 3, aged 66, of hypertensive heart disease.

Robert Scott Hensell, Dormont, Pa.; Western Pennsylvania Medical College, Pittsburgh, 1899; member of the American Medical Association; served during World War I; captain, medical reserve corps, U. S. Army, not on active duty; died in Homestead, Fla., March 13, aged 77, of cerebral hemorrhage.

Joseph Adams Hirsch ✠ Edwardsville, Ill.; Homeopathic Medical College of Missouri, St. Louis, 1899; served on the staffs of the Alton Memorial and St. Joseph's hospitals in Alton; died March 28, aged 73, of injuries received when the automobile in which he was driving crashed into a tree.

Joseph Helbrandt Holleman, Springfield, S. D.; Harvard Medical School, Boston, 1934; diplomate of the National Board of Medical Examiners; died recently, aged 41.

Mary Piper Houck ✠ La Crosse, Wis.; Woman's Medical College of Pennsylvania, Philadelphia, 1887; on the staff of the La Crosse Hospital; died in the Grandview Hospital March 28, aged 80, of mitral valvular disease.

Henry Arthur Hoyt ✠ Watertown, N. Y.; Syracuse University College of Medicine, 1896; an affiliate Fellow of the American Medical Association; served on the staffs of the Mercy Hospital and the House of the Good Samaritan; died in a hospital at Ogdensburg, March 12, aged 81, of cerebral hemorrhage.

Mary Osborn Hoyt, Chicago; the Hahnemann Medical College and Hospital, Chicago, 1894; died March 3, aged 79, of carcinoma of the stomach.

Edwin Lawrence Hume, Bourbon, Mo.; Barnes Medical College, St. Louis, 1905; member of the American Medical Association; died in the McFarland Hospital, Rolla, recently, aged 81, of carcinoma of the urinary bladder.

Nathan M. Humphrey, Fairport, N. Y.; Hahnemann Medical College and Hospital of Philadelphia, 1889; for many years health officer of Penfield; for six years Monroe County coroner's physician; died March 11, aged 83, of cerebral hemorrhage.

John H. Hunt, Glendive, Mont.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1890; formerly affiliated with the Northern Pacific Hospital; died March 22, aged 84, of influenza and general senility.

Franklin Enoch Jacobi, St. Louis; National University of Arts and Sciences Medical Department, St. Louis, 1913; member of the American Medical Association; served overseas during World War I; died March 8, aged 68, of coronary occlusion.

Melville T. Johnson, Atlanta, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1892; at one time chairman of the board of medical examiners in Georgia; died recently, aged 78.

Harry E. Jones, Dickson City, Pa.; Medico-Chirurgical College of Philadelphia, 1902; member of the American Medical Association; served two terms on the school board; died March 27, aged 71, of carcinoma of the prostate.

Michael J. Kaufman, Newark, N. J.; University of Odessa Faculty of Medicine, Russia, 1915; member of the American Medical Association; examining physician for the Selective Service during World War II; on the staff of the Beth Israel Hospital; died March 23, aged 64, of cerebral hemorrhage.

Howard Francis Keefe, Cranston, R. I.; Tufts College Medical School, Boston, 1924; member of the American Medical Association; school physician for the city of Cranston and examining physician for the state athletic commission; on the staffs of St. Joseph's and Homeopathic hospitals, Providence; died March 13, aged 47.

David S. Keisler, Leesville, S. C.; Medical College of the State of South Carolina, Charleston, 1911; member of the American Medical Association; died March 24, aged 65, of angina pectoris.

Bessie Andrus Vandeventer Kellogg, Lincoln, Neb.; National Medical University, Chicago, 1905; Hering Medical College, Chicago, 1907 and Detroit College of Medicine and Surgery 1922; died March 5, aged 60.

Roy Kennedy Kendall, Miami, Fla.; Harvard Medical School, Boston, 1943; interned at the Children's Hospital in Boston and the James M. Jackson Memorial Hospital, where he died March 13, aged 27, of pneumothorax and metastatic tumor.

Norbert M. Kersten ✠ De Pere, Wis.; Milwaukee Medical College, 1907; past president of the Brown-Kewaunee-Door Counties Medical Society; served as an examiner for the Selective Service boards during World Wars I and II; on the staffs of the Bellin, St. Mary's and St. Vincent's hospitals in Green Bay; died March 30, aged 62, of angina pectoris.

Frederick Luther Koontz, Louisville, Ky.; Kentucky School of Medicine, Louisville, 1900; fellow of the American College of Surgeons; formerly adjunct professor of abdominal surgery and gynecology at the University of Louisville School of Medicine; served overseas during World War I; colonel, medical reserve corps, U. S. Army, not on active duty; died March 12, aged 70, of pernicious anemia.

Francis John Krajewski ✠ Wilkes-Barre, Pa.; Medico-Chirurgical College of Philadelphia, 1902; died March 11, aged 70.

Maurice Alexander Kugel ✠ Miami Beach, Fla.; Yale University School of Medicine, New Haven, Conn., 1926; served during World War I; on the staff of St. Francis Hospital; formerly on the staffs of the Mount Sinai and Beth Israel hospitals, New York; president of the Miami Heart Association; died March 9, aged 46, of coronary occlusion.

William Cooke Lackey ✠ Fort Worth, Texas; Memphis (Tenn.) Hospital Medical College, 1903; on the staffs of the All Saints Episcopal, Harris Memorial Methodist and St. Joseph's hospitals; died April 5, aged 68, of heart disease.

John V. Larzalere, Escondido, Calif.; University of Buffalo School of Medicine, 1884; served as president of the first chamber of commerce, member of the school board and board of health; died March 10, aged 87, of senility.

Reuben H. Leavitt, Glendale, Calif.; Medical College of Indiana, Indianapolis, 1902; member of the American Medical Association and the North Dakota State Medical Association; died in the Physicians and Surgeons Hospital April 2, aged 69, of injuries received in an automobile accident.

Ernest R. Luckett, Marengo, Ind.; University of Louisville (Ky.) Medical Department, 1894; died in Martinsville, March 28, aged 77, of heart disease.

Gustave Leonard McClellan ✠ Detroit; Detroit College of Medicine, 1905; fellow and past president of the American College of Chest Physicians; past president of the Wayne County Medical Society; served on the staffs of the Providence Hospital and the Detroit Tuberculosis Sanatorium; died February 11, aged 61, of coronary thrombosis.

William A. McMichael, Keene, Ohio; Medical College of Ohio, Cincinnati, 1897; served for many years in the county health department; died March 4, aged 77.

William Joseph MacMurtrie ✠ Philadelphia; Medico-Chirurgical College of Philadelphia, 1915; served during World War I; chief obstetrician on the staff of the Misericordia Hospital and the Fitzgerald-Mercy Hospital, where he died March 22, aged 56.

Albert Harold Mayer, Alliance, Ohio; Starling-Ohio Medical College, Columbus, 1912; died in the City Hospital April 2, aged 55.

Fred Selby Perrings, Weldon Spring, Mo.; Washington University School of Medicine, St. Louis, 1913; served during World Wars I and II; medical director of the Weldon Spring Ordnance Works; died in the Missouri Baptist Hospital, St. Louis, March 24, aged 57, of uremia.

John A. Pirkle, Monroe, Ga.; University of Georgia School of Medicine, Augusta, 1891; member of the American Medical Association; on the staff of the Walton County Hospital, where he died March 22, aged 75, of coronary thrombosis.

Charles Otto Reinhardt ✠ Mascoutah, Ill.; Loyola University School of Medicine, Chicago, 1936; served as a first lieutenant in the medical corps, Army of the United States, during World War II; died March 19, aged 36.

John Henry Reynolds Jr., Akron, Pa.; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1936; member of the American Medical Association; found dead March 25, aged 34.

Oluf Andreasen Ring, San Francisco; University of California Medical School, San Francisco, 1929; died March 29, aged 46.

Alanson D. Rose, Providence, R. I.; Albany (N. Y.) Medical College, 1889; member of the American Medical Association; died February 19, aged 79.

Emanuel Zachary Shapiro ✠ Duluth, Minn.; Rush Medical College, Chicago, 1911; member of the American Urological Association and the American Academy of Dermatology and Syphilology; affiliated with the St. Luke's and St. Mary's hospitals; died in Rochester March 22, aged 60, of glioma of the brain.

George W. Slover, Sulphur, Okla.; Barnes Medical College, St. Louis, 1901; member of the American Medical Association; county health officer; died March 13, aged 79, of uremia.

Norman Solny ✠ Staten Island, N. Y.; University of Tennessee College of Medicine, Memphis, 1930; died recently, aged 42, of coronary thrombosis.

Fredrick Henry Stark, Los Angeles; Magyar Királyi Pázmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest, Hungary, 1921; died March 18, aged 56, of coronary thrombosis.

Wilbur Watkins Stearns ✠ Yonkers, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1915; served during World War I; at one time associated with the Michigan State Prison in Jackson, Mich.; director of obstetrics at St. John's Riverside Hospital; died March 22, aged 55, of coronary thrombosis.

Forrest Custer Swearingen ✠ Pomona, Calif.; Rush Medical College, Chicago, 1914; specialist certified by the American Board of Radiology, Inc.; member of the American Roentgen Ray Society, Radiological Society of North America, Inc., and the American College of Radiology; died March 24, aged 60, of hypertension and uremia.

Julia Ernestine Teele, Greens Farms, Conn.; Woman's Medical College of Pennsylvania, Philadelphia, 1888; member of the American Medical Association; died March 24, aged 83.

Wayne King Templeton ✠ Riverside, Calif.; University of Cincinnati College of Medicine, 1922; secretary and past president of the Riverside County Medical Society; served during World War I and as city health officer; affiliated with the Riverside Community Hospital; died March 17, aged 50, of heart disease.

Abraham Thomas, Cleveland; Meharry Medical College, Nashville, Tenn., 1925; died March 3, aged 58, of coronary thrombosis and pneumonia.

Bennetta D. Titlow, Springfield, Ohio; Woman's Medical College of Pennsylvania, Philadelphia, 1891; member of the American Medical Association; served in the medical corps of the U. S. Army in France during World War I; died March 7, aged 78, of carcinoma of the leg.

Louis Umbstetter, Cleveland; University of Wooster Medical Department, Cleveland, 1885; died recently, aged 84, of bronchopneumonia.

Adam V. Walter, Lancaster, Pa.; Jefferson Medical College of Philadelphia, 1895; member of the American Medical Association; for many years county coroner; served as president of the Brownstown National Bank; died March 1, aged 74, of heart disease.

William Walter Webb, Vancouver, Wash.; Beaumont Hospital Medical College, St. Louis, 1901; served on the school board in Winlock; died March 22, aged 65, of adhesive pericarditis.

James Sanders White, Campbellsville, Ky.; University of Tennessee Medical Department, Nashville, 1887; died in the Ephraim McDowell Memorial Hospital, Danville, March 22, aged 82.

George A. Wiggins ✠ Milan, Ill.; Medico-Chirurgical College of Philadelphia, 1886; past president of staff of the St. Anthony's Hospital, Rock Island, of which he had been a member; died March 9, aged 84.

Raymond Gerard Willse, Baltimore; University of Maryland School of Medicine, Baltimore, 1909; member of the American Medical Association; assistant professor of gynecology at his alma mater; died in the Union Memorial Hospital March 16, aged 63, of acute pulmonary edema and coronary thrombosis.

Sanford Eugene Winget, Bloomington, Ill.; Barnes Medical College, St. Louis, 1898; died March 18, aged 70, of myocarditis.

Lester Drummond Wise, Long Branch, N. J.; Columbia University College of Physicians and Surgeons, New York, 1904; member of the American Medical Association; died in Los Angeles March 26, aged 64, of cardiac decompensation and bronchial asthma.

Bert Leslie Taylor Woods, Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1906; member of the American Medical Association; on the staffs of Henrotin, Grant, Garfield Park and St. Elizabeth's hospitals; died March 21, aged 63, of coronary thrombosis.

Courtney Bernard Wright, War, W. Va.; Howard University College of Medicine, Washington, D. C., 1935; found dead March 11, aged 46.

Margaret Magnon York, Glendale, Calif.; Columbian University Medical Department, Washington, D. C., 1893; served on the staff of the Physicians and Surgeons Hospital; died in Los Angeles March 23, aged 88, of endometriosis.

DIED WHILE IN MILITARY SERVICE

Richard Everest Gove, Peru, N. Y.; Cornell University Medical College, New York, 1923; interned at the Wyckoff Heights Hospital of Brooklyn; began active duty as a captain in the medical corps, Army of the United States, in May 1942; died in the Tilton General Hospital, Fort Dix, January 5, aged 47, of meningitis, purulent, due to Streptococcus viridans and lobar pneumonia.

Thomas Eads Hebert, Covington, La.; Louisiana State University School of Medicine, New Orleans, 1940; interned at the Charity Hospital in New Orleans; began active duty as a first lieutenant in the National Guard on Nov. 25, 1940; promoted to captain on July 13, 1942 in the medical corps, Army of the United States (National Guard), and later to major; died in the Moseley Clinic, New Roads, La., Oct. 25, 1943, aged 26, from internal injuries.

Thomas Carlton Honea, Cleburne, Texas; University of Nashville (Tenn.) Medical Department, 1909; commissioned a captain in the Texas National Guard in 1922; promoted to major in 1929; began active duty as a lieutenant colonel in the National Guard on Nov. 25, 1940; promoted to colonel; after serving at Camp Bowie, Texas, and Fort Sill, Okla., was transferred to Camp Maxey, Texas, where he was hospital inspector from September 1942 until placed on terminal leave shortly before his death January 11, aged 61, of carcinoma.

Harry Zola Martz ✠ Birmingham, Ala.; University and Bellevue Hospital Medical College, New York, 1933; born in New York, April 22, 1909; interned at the Cumberland Hospital in Brooklyn, where he served a residency in surgery; formerly instructor in surgical anatomy and lecturer in traumatic surgery at the Long Island College of Medicine; attending surgeon to the Hillman, Baptist and Jefferson hospitals; specialist certified by the American Board of Surgery; fellow of the American College of Surgeons; member of the National Gastroenterological Association; began active duty as a captain in the medical corps, Army of the United States, in October 1942; promoted to major; served in posts in this country and in Okinawa, and was chief of general surgery section at the Oliver General Hospital; received a citation on overseas service; died in the Halloran General Hospital, Staten Island, April 3, aged 36, of brain tumor.

Robert Emmet Seibels Jr., Columbia, S. C.; Duke University School of Medicine, Durham, N. C., 1943; born in Williamstown, Mass., Dec. 18, 1917; diplomate of the National Board of Medical Examiners; interned at the Duke Hospital in Durham, N. C.; began active duty as a lieutenant (jg) in the medical corps of the U. S. Naval Reserve on Dec. 18, 1944; served as the junior medical officer aboard the U. S. S. *San Diego;* received official commendation from Admiral Spruance and was recipient of the naval ribbon for medical service he rendered to thirty-four severely scalded sailors from a destroyer whose boiler room had been struck by a kamikaze dive bomber at Okinawa; since last January, when his ship was decommissioned, had served at the U. S. Naval Base at Bremerton, Wash., where he was awaiting transfer to the Naval Hospital at Bethesda, Md.; accidentally killed at Mount Baker, Wash., May 12, aged 28, in a skiing accident.

Herman Matthew Turk, Euclid, Ohio; Ohio State University College of Medicine, Columbus, 1929; member of the American Psychiatric Association; served a residency at the Lima State Hospital, where he was superintendent; served on the faculty of Our Lady of the Lake College at San Antonio, Texas; major, medical corps, Army of the United States; set up an examining board for cadets at Kelley Field, Texas, and later spent two years teaching neuropsychiatry at the School of Aviation Medicine at Randolph Field; in May 1944 assigned to the 12th A. A. F. in Italy as flight surgeon and later became chief psychiatrist; killed in an airplane crash in Corsica, Jan. 23, 1945, aged 43.

Lyman Flinn West ✠ Boise, Idaho; Northwestern University Medical School, Chicago, 1926; served as secretary-treasurer of the Southwestern Idaho District Medical Society; interned at St. Luke's Hospital in Chicago; commissioned a lieutenant (jg) in the medical corps of the U. S. Naval Reserve on May 27, 1936; began active duty as a lieutenant on May 1, 1940; promoted to lieutenant commander and commander; served overseas in the South Pacific for seventeen months; killed in a plane crash in La Conner, Aug. 13, 1945, aged 44.

Foreign Letters

LONDON

(From Our Regular Correspondent)

June 15, 1946.

The Universities and Government Control of Hospitals

In the national health service bill the government proposes to take over all the hospitals but recognizes that the teaching hospitals present a special problem. Under the bill the minister of health has power, after consultation with the university concerned, to designate as a teaching hospital any hospital or group of hospitals which appears to him to provide university facilities for undergraduate or postgraduate clinical teaching. The board of governors of a teaching hospital has power to conduct research. The method whereby the board of governors is to be appointed is set out in the bill. Of the members not more than one third are to be nominated by the university with which the hospital is associated.

In a letter to the *Times* the vice chancellors of the Universities of Oxford and Cambridge point out that the government proposals are not satisfactory. On the one hand, research is a primary function of universities and the responsibility for conducting clinical research should rest exclusively with the university rather than with the board of governors of the hospital. On the other hand, as clinical research can be provided only in a hospital, it would seem reasonable, subject to financial limitations prescribed by the minister of health, to place the responsibility for providing the facilities for such research as well as for teaching on the board of governors of the hospital in consultation with the university. The university should therefore be more strongly represented on the board of governors than is proposed. Finally, as it would be difficult, if not impossible, to organize a teaching hospital without university cooperation, it seems more appropriate that the minister when he designates a teaching hospital should act "on the recommendation of" instead of merely "in consultation with" the universities concerned. The vice chancellors have certainly made out a good case. It will tend to diminish efficiency if, in its zeal for leveling down and promoting a spurious equality, the labor government does not recognize the claims of scientific bodies such as universities.

Presentation of Gifts at the Royal College of Surgeons

Sir William Collins, whose benefactions to the Royal College of Surgeons have previously been reported in THE JOURNAL, has now handed to the president a check for $500,000, which he promised in February for the scientific departments of the college in encouragement of the project for an academic medical center in Lincoln's Inn Fields near the college.

At the same meeting of the council of the college Prof. E. C. Dodds of the Middlesex Hospital was presented with a check for $5,000, a prize given by Mr. Charles Mayer of New York in recognition of his work in discovering and studying diethylstilbestrol and as a contribution for further researches in the field of synthetic hormones.

New Chair of Pharmacology

The University of London has accepted an offer from the trustees of the estate of the late Sid Henry Wellcome of the sum of $370,000 for the endowment of the chair of pharmacology at the College of the Pharmaceutical Society now occupied by Dr. G. A. H. Buttle, which will henceforth be called the Wellcome chair. The department of pharmacology was founded in 1936 and has made important contributions to research and teaching.

Epidemic of Nagana: Failure to Control Tsetse Fly

The South African Agricultural Department is beginning to be alarmed by the spread of nagana in Zululand. This disease is a trypanosomiasis of cattle, which is conveyed by the bite of the tsetse fly, which also transmits the trypanosome of sleeping sickness to man. During the past three months 15,000 cattle have died in Zululand. The only effective means of controlling the disease is to control the tsetse fly, but twenty-five years' work has not produced a successful method. At one time it was thought that trapping would clear the tsetse areas, but that hope proved vain. Then the veterinary authorities embarked on a policy of shooting game in tsetse areas. The idea was that when the natural hosts were destroyed the tsetse fly would be reduced to negligible numbers. This policy has been in force for ten years and has been carried out with special thoroughness during the past few months, but nagana is worse than ever. The Agricultural Department has had some success in experimental dusting of DDT over large areas for the control of the flies. It is hoped that if this is continued DDT may save game from bullets as well as cattle from nagana. A new drug, 1553, is to be used for inoculation purposes. The first consignment of six thousand doses is being flown from Britain and will be used in a mass inoculation campaign. Not only cattle but donkeys, dogs and horses have died from the disease.

The Bicentenary of the Rotunda Hospital

The Rotunda Hospital, Dublin, the oldest midwifery hospital in the British Isles and famous all over the world, will celebrate its bicentenary during the week beginning July 7, 1947. Its actual bicentenary was in 1945 but was not celebrated then because of the war. An elaborate program has been arranged in which the other Dublin midwifery hospital, the Coombe and the National Maternity, will take part. To facilitate travel reservations and hotel accommodation the committee asks those proposing to attend the congress to register early with the honorary secretary, Mr. G. F. Klinger, Rotunda Hospital, Dublin. The program, with details of the scientific papers and of the social functions and entertainments, will be circulated toward the end of this year and a copy will be sent to all who register. The subject for the opening session on July 7 is the History of Midwifery, followed by a discussion on Puerperal Sepsis. On July 8 Eclampsia is the subject. The program for July 9 has not yet been arranged. On July 10 Sterility is the subject, on the 11th Fetal and Neonatal Mortality and on the 12th Shock in Obstetrics. At these sessions leading obstetricians and gynecologists from various countries will take the chair or speak in the discussions.

Cost of Traffic Accidents

The ghastly toll of traffic accidents is usually given in casualties, but a professor of economics, Mr. J. H. Jones, at the request of the Ministry of Transport, has estimated in terms of national income their cost to the community. For the purpose of his calculation he took the prewar period 1935-1938 and found that the annual cost of road accidents, at the price and income levels that were then prevailing, was approximately $300,000,000, representing 1⅓ per cent of the total national income. If the same number of similar accidents were to occur under present conditions the annual cost would be $500,000,000. An appendix to the report gives the government actuary's alternative estimate, based on a different method of calculation, as $250,000,000 annually for the period 1935-1938. The report of the Ministry of Transport on road accidents in Britain during last March shows that 350 persons were killed and 10,684 injured. For March 1945 the respective figures were 396 and 8,722. The Ministry of Transport is conducting a publicity campaign against traffic accidents by means of posters enjoining greater care.

PARIS

(From Our Regular Correspondent)

June 17, 1946.

French Medicine Is Not to Be Converted Into a Public Office

Because of opposition from certain quarters of the medical profession to the new social security organization, the minister of labor has once more specified in a press conference that, in the interest of the medical and social efficiency of this organization, it is necessary to maintain the principles of liberal medicine as far as possible. The new legislation confirms the free choice of doctors by patients, therapeutic liberty of the practitioner, professional secrecy and direct payment of fees by patients to doctors. These principles being maintained, limited mitigation on two points is being considered: the fixing of fees and the control of medical care. The National Commission for the unification of fees in an important meeting May 6 approved the fees provided for by agreements between the "Social Security Funds" and the medical associations of certain districts; for other districts, where no agreement has been concluded, new fees were fixed.

Clitocybine

In the letter of January 9 (THE JOURNAL, February 9, p. 368) mention was made of a new antibacterial substance discovered by Prof. A. Charles Hollande of the Montpellier Faculty of Pharmacy. This product is extracted from the mushroom Clitocybe gigantea. With the collaboration of Professor Nobecourt of Grenoble, the author succeeded in cultivating this mushroom (an alpestrine plant) in a special medium. The culture is made through cuttings or through development of spores. The author has also obtained purified clitocybine. Unlike penicillin, it is an endocellular substance, extracted from the tissue of the mushroom and not from the medium of culture. It is quite innocuous for guinea pigs. Research on the antituberculotic action of purified clitocybine on inoculated animals and on guinea pigs in which Brucella melitenesis has been inoculated is in progress. To facilitate this research a public subscription has been organized which has yielded several million francs.

Premarriage Certificate

The *Journal officiel* of April 28 contained the text of a premarriage certificate prepared by the Ministry for Public Health and Population for the use of physicians. Radioscopy or radiography of the lungs and serologic tests are compulsory. The text discusses the obligation of the physician to impart his observations to the person concerned, drawing the patient's attention to the consequences as to his own health, his wife's and his descendants'. The doctor is strictly bound to professional secrecy toward the intended husband and wife. The certificate will embody neither diagnosis nor advice. Therefore much will depend on the intelligence of the doctor in order that this certificate, which is of paramount importance for the prophylaxis of pulmonary tuberculosis and syphilis, may not be useless.

Medical Days of Tunis

A medical congress attended by more than 100 doctors took place in Tunis from April 13 to 20. Professors Debré and Thieffry spoke of early tuberculosis in children. The study of industrial diseases was the subject of a communication from Fabre and Gaultier. A paper on industrial medicine was given by Desoille. A special meeting was devoted to deported members of the medical profession. Mrs. Sparrow and Mr. Lamarche of Tunis gave an account of their observations on 18 mental patients inoculated with products of experimentally infected lice. The inoculation was made by scarification of the skin on which a drop of liquid, obtained by dissection of lice, was deposited. Laigret and Corcos reported their observations on a new transmissible epidemic disease which manifests itself by prodromes of discomfort, shivering, backache, fever to 104 F., violent headache, sciatica and painful epigastric distress. On the third day emesis of red and black blood may occur. The temperature diminishes and there is prolonged convalescence with asthenia and neuralgia. The spleen, liver and skin are normal. There is no icterus. All analyses are negative. Amebiasis has been considered. H. Mamon presented studies on amebic rheumatism in a subacute and subfebrile form with monoarthritis or polyarthritis responding to treatment with emetine.

ITALY

(From Our Regular Correspondent)

NAPLES, June 20, 1946.

Therapy of Schizophrenia

The Società di Neurologia recently met in Genoa. Dr. Fiamberti, head of the psychiatric hospital of Varese City, discussed the technic and therapeutic value of intravenous injections of acetylcholine bromide in large doses. This treatment was reported in the February 1944 issue of the *Archives of Neurology and Psychiatry*. According to American authors the results did not justify further application of the treatment. According to Italian authors acetylcholine gives better curative results in schizophrenia than electrical shock or insulin. Schizophrenia is a toxicosis of predisposed persons. The phenomenon of mental dissociation (from the Greek *schizo*) carries the idea of a dysfunction of certain nervous segments of the brain concerned with balancing the effects of cortical and subcortical currents. A toxic phenomenon must be the cause of the alteration of the mechanism of reception of affective currents in the nervous centers of the brain and of the deviation of an intelligent reaction of the same centers to the affective currents. Nervous dissociation between affection and intelligence, which was so well described by Bleuler, is the cause of the abnormal behavior of schizophrenic patients and of their violent, dangerous impulses, such as killing members of the family for no reason at all or self mutilation (such as that of Van Gogh the painter, who cut away his ear with a razor and sent it within a closed envelop to the woman he loved). There are certain angles of the subject which cannot be explained, as for instance the spontaneous regression of the disease without any cure, the long periods of mental reintegration of some of the patients and the production of artistic work of good quality during clear periods in some of the patients, such as the cases of Van Gogh, Nijinski, the dancer, and painters and sculptors of different epochs. Italian psychiatrists, including Buscaino, who have given attention for several years to schizophrenia, found that when toxicosis diminishes or is controlled the nervous functions of associating affection and mental reactions improve with consequent improvement or cure of the patient. The causes of the toxic phenomena are certain amines and amine derivatives from the intestinal tract. Intestinal infectious bacteria, such as that of the typhoid-paratyphoid group, stimulate formation of these substances. Typhoid is frequently found in the history of schizophrenic patients. Buscaino, who carried out microscopic studies, found that toxic substances of the amine type permanently attack the cells of the cerebral cortex. The changes in the cortical cells are the probable cause of the rupture of harmony between instinct, emotion and affection and mental reaction. It is obvious that predisposition from a deficiency of brain acetylcholine is a necessary factor. According to the Italians, toxicosis from an infection is the main factor. The disorder is not a hereditary genopathy, such as hemophilia or polydactylia. The successful results of acetylcholine in schizophrenia show that the dissociation between affective life and intelligence is due to deficient production of

acetylcholine in the brain. Acetylcholine stimulates the nervous cortical and subcortical mechanisms of emotion and thinking. The cells of the brain are charged with large amounts of acetylcholine through the circulating blood. Large amounts of the substance are used by the cerebral cells in the complicated production of mental activity and mental reactions.

Enzyme Theory of Drug Action

A defect for the production of acetylcholine by cerebral cells is inherited, just as a thyroid deficiency (obesity) is inherited. The mechanism of curative action of acetylcholine when intravenously administered in large doses is explained both by the production of shock (similar to insulin shock) and by the so-called enzyme theory of drug action (Green, M. W.: *J. Am. Pharm. A.* **7**:103 [March] 1946). Through this theory acetylcholine in the blood inhibits production of cholinesterase, which is the cause of the disturbances of the acetylcholine metabolism and of the consequent deficient supply to and production of the substance in the brain and of the disease.

BRAZIL

(From Our Regular Correspondent)

RIO DE JANEIRO, June 22, 1946.

South American Paracoccidioides

Interesting new data on South American paracoccidioides or paracoccidioidal granulomatosis is contained in two recent reports published by Drs. Floriano de Almeida, Carlos S. Lacaz and Adherbal C. Cunha, from the department of microbiology of the University of São Paulo, in reference to 750 cases of the disease registered at that department. The disease was reported for the first time in the interior of the state of São Paulo by Walter Haberfeld in 1919, who described several cases and emphasized the diffusion and malignity of the disease. This work was later confirmed by Lutz, by Splendore and by de Almeida in São Paulo and other states of Brazil. Flavio Niño demonstrated the presence of the disease in Argentina, and Cifferri and Redaeli in several other countries of South America. J. W. Jordan and Fred Weidman of the United States (1936) called this paracoccidioides "de Almeida's disease." The 750 cases include 670 males and 80 females, this unequal division being explained by the larger exposure of males to the contaminating soil. This explains also the much larger predominance of the disease in agricultural laborers and in Japanese or Japanese born patients, who have a great preference for agricultural activities. In Japanese and Japanese born patients the incidence in females is also high, since the women of this group take an active part in agriculture. According to age there were 140 cases below 20 years, 476 between 20 and 49, and 134 at 50 and over. Thus 63.47 per cent of the patients belong to the group most actively engaged in work—a definite economic loss for the community. In this group of 750 cases the pure visceral forms of the disease are rare, since the great majority are of lymphotegumentary forms. It is interesting to point out that in the 75 Spaniards included in the group the disease was always mild, with lesions confined to the lips and gums, without ganglial or visceral involvement.

In a second paper the same authors report the results of their investigations on the treatment of the disease as well as the study of the criteria of cure. As the sulfonamides have only a fungistatic action, they suggest the simultaneous use of sulfadiazine and the polyvalent antimycotic vaccines, which they have prepared and used with encouraging results except in the visceral forms of the disease. In serious cases the treatment has to be intermittent, "by assaults," until cure is reached. As criteria of cure, besides the clinical results, they suggest the validity of culture of the micro-organism, which is not easy, and the blood sedimentation rate, which is of great value.

Thiamine and Pyridoxine in Starchy Foods

Dr. F. Moura Campos, professor of physiology at the University of São Paulo, has published another report of a series of investigations in the Department of Physiology on the composition of Brazilian foodstuffs, especially in reference to vitamins and minerals. These researches are especially significant at the present moment, when, besides the scarcity of certain foodstuffs, the variation in their composition is a common fact associated with difficulties in the production and in the processing of them. In his paper, Dr. Campos reports investigation on the content of thiamine and pyridoxine in samples of starchy foodstuffs, mainly potatoes and manioc (Maniot utilissima). In the experiments performed with a supposed thiamine deficient ration, the animals with experimental beriberi were treated with thiamine (33 to 66 micrograms) and the protection time to the next crisis was recorded. In another paper, reported in a previous letter, the author has shown that a rat can be kept on a thiamine deficient diet for a long time, in order to present several crises of polyneuritis, each one being treated as soon as recognized. Under this condition the protection time was gradually reduced. In the researches now reported, the use of commercial starch has shown a paradoxical increase in the protection time. Rapid restoration and continuous increase of body weight have been observed. When cane sugar was substituted for commercial starch growth stopped, the animals lost weight and some of them died from B_1 avitaminosis.

Quinacrine for Pemphigus Foliaceus

Dr. Mario Fonzari of São Paulo has reported good results on the use of quinacrine in pemphigus foliaceus ("wildfire"). Up to the present time the only good results obtained were with quinine, which causes a more rapid drying of the vesicles and earlier exfoliation than other drugs. Dr. Fonzari emphasizes that quinacrine is much better than quinine: the exudation and the vesicles dry out rapidly, and after a short stage of exfoliation the skin lesions heal. Nevertheless quinacrine does not cure pemphigus foliaceus.

Brief Items

The campaign for the construction of more hospitals and their widest use in the training of medical students continues in the leading cities of Brazil. A few days ago Dr. João Marinho, professor emeritus of the University of Rio de Janeiro, addressed the undergraduate members of the medical school of the University of São Paulo on "The Hospital and the Medical Student." Dr. Marinho is an authority on the subject through his special knowledge of the best hospitals in several countries of Europe and America.

Marriages

FRANKLIN CARL MASSEY, Philadelphia, to Miss Elsie Barbara Ehmann of St. Davis, Pa., April 6.

JOHN WILLIAMS MCHARRY, Havana, Ill., to Miss Esther Dyer at University City, Mo., April 17.

EDWARD WILLIAM F. KALLAL, Chicago, to Miss Mary Elizabeth Lowe of Buena Vista, Ga., May 18.

DAVIS DELEON MOISE, Durham, N. C., to Miss Sara Deal Purnell of Franklinton, May 11.

PAUL H. RINGER, Asheville, N. C., to Miss Mary Averell Brown of New York, April 27.

JEROME OLKIN RAVEL to Miss Marjorie Joanne Macow, both of Austin, Texas, March 23.

MORRIS GOLDENBERG, Los Angeles, to Miss Alice Virginia Lee of Chicago, May 4.

ELMER G. KOEHLER to Mrs. Ada Snellenberger, both of Elkhart, Ind., May 31.

J. WARREN KYLE, Tullahoma, Tenn., to Miss Eleanor Whitney, April 21.

Correspondence

PERPETUATION OF NERVOUS DISORDERS BY ARMY PSYCHIATRIC PROCEDURE

To the Editor:—Your choice to publish the article by Dr. Claude Uhler in THE JOURNAL, June 22, entitled "Perpetuation of Nervous Disorders by Army Psychiatric Procedure" is an extremely unfortunate one. Any article so filled with accusations and condemnation might better have been left unpublished to protect the author, if he did not know better, to protect THE JOURNAL, and out of respect to that segment of American medicine represented by psychiatry in the Army.

Perhaps the fact that Dr. Uhler, previously Major, had an unhappy experience in the Army, as indicated by his article, has something to do with his evaluation of army psychiatry. There are many misstatements of fact: We were not able to staff induction centers with "leading psychiatrists" in many, many cases; a very small percentage of psychiatrists were assigned to general medical duties, probably less than any other specialty of medicine; every chief of a neuropsychiatric service in the Army would challenge the statement that there were any patients in psychiatric wards who did not see a psychiatrist "for weeks at a time"; it is totally inaccurate; no official directive at any time prohibited the use of diagnoses in psychiatric records. The directive did require the psychiatrist to make a more definitive diagnosis than merely psychoneurosis or psychosis, and it is admitted that this was difficult for certain psychiatrists, perhaps the writer. The fact that Dr. Uhler had so little satisfaction in the Army is not now important. The fact that THE JOURNAL would publish so erroneous an article is important.

The point of view of every physician in the Army depended very much on his own ability and capacity to do a good job in his specialized field of medicine. All of us were at times greatly frustrated, but if an individual lacked a capacity to adjust he invariably had difficulty, and one must suspect that the type of experience reported by Dr. Uhler reflects his incapability rather than the Army's inability to utiiize his services. There is no question that the Army made mistakes and the "Psychiatric Administrative Branch of the Army" also made mistakes. Some of our greatest handicaps were certain individuals within our ranks who could tear down our standing much faster than hundreds of others of us could build it up.

WILLIAM C. MENNINGER, Brigadier General, A. U. S.
Director, Neuropsychiatry Consultants Division.

To the Editor:—Many of us who have been in the armed services were greatly shocked by the article published in THE JOURNAL of June 22 entitled "Perpetuation of Nervous Disorders by Army Psychiatric Procedure," by Claude Uhler. This article is full of distortions and misstatements and undoubtedly projects the unhappy and ineffectual participation of the writer. There was no official directive at any time that prohibited the use of diagnoses in the psychiatric records. The staffing of induction centers with "leading psychiatrists" with the dearth of personnel is an absurdity. I served as a neuropsychiatric consultant to one of the largest service commands as well as psychiatric consultant of Headquarters Armed Forces of the Pacific and noted only rare instances where psychiatrists were assigned to general medical duties. There were urgent and potent reasons for such assignments when they were made. On my return to civilian life I look back with the greatest satisfaction and admiration on the work established and maintained by Gen. William Menninger, director of the neuropsychiatric consultant division. I have a feeling that a hard job was well done. The article by Dr. Uhler will add to unnecessary misunderstanding and criticisms of an outstanding special field of medicine which is now being accepted by lay and professional organizations.

FRANKLIN G. EBAUGH, M.D., Denver.

EFFECTS OF THIOURACIL ON THYROID

To the Editor:—The increasing use of thiouracil in the treatment of thyrotoxicosis has brought to light a new problem quite distinct from the more manifest side-effects of the drug. This has arisen from the fact that the usage produces increased vascularity of the gland, thereby increasing the technical difficulties of operation. It has been suggested that substituting iodine for thiouracil for a period of time preoperatively would remove this hazard. Possibly there may be another method of achieving this same end.

There is a question whether thiouracil has a deleterious effect on blood vessels not only in the thyroid gland but systemically, as is seen occasionally in the use of thiocyanate preparations in the treatment of indicated types of hypertension. In the latter, according to Dr. John Q. Griffith and his co-workers and with the cooperation of Dr. J. F. Couch of the United States Department of Agriculture, the integrity of the smaller blood vessels may be maintained by the use of rutin. Perhaps the routine use of rutin in patients with thyrotoxicosis under treatment with thiouracil might obtain the same protective benefit. It is suggested that rutin in a dosage of 20 mg. three times daily be used synchronously with thiouracil, despite the fact that the Göthlin index of several such patients was within normal limits. Admittedly experimental, the possible advantages of this conception warrant clinical trial.

JOSEPH T. FREEMAN, M.D., Philadelphia.

PELLAGRA PRODUCED BY ADENINE

To the Editor:—Adenine in the form of the free base alone or mixed with monobasic sodium phosphate was given orally in daily doses ranging from 300 to 500 mg. each to 5 dogs over a period of one to three weeks. The dogs were kept on a normal diet (K. F. S. [Kennel Food Supply] dog food).

After ten to twenty days of treatment all these dogs developed multiple avitaminosis (blacktongue) and a rise in blood pressure. The addition of the phosphate accelerated the onset and development of the syndrome.

These findings are of interest to the physician since they demonstrate a direct relationship between purine metabolism and avitaminosis and suggest caution in the use of adenine as a therapeutic agent.

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Department of Pharmacology,
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New York.

EPHEDRINE AND IMPOTENCE

To the Editor:—I have read with great interest in the April 13 issue of THE JOURNAL a communication from Dr. Thomas G. Harvey of Maine dealing with "Ephedrine and Impotence" (page 1054). On reading this article I recollected that during the war, when I removed from Shanghai to the interior of China, I found that the Taoists in western China have been taking ephedrine for over 2,000 years to help them in keeping celibacy. I think that this fact is of sufficient scientific interest to be worth mentioning.

K. F. NEE, Shanghai, China.
General Manager, China Biological & Chemical Laboratories, Ltd.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Malpractice: Fracture of Urethra Following Insertion of Metal Catheter.—The plaintiff sued for damages alleged to have resulted from the malpractice of the defendant physician. From a judgment in favor of the plaintiff, the defendant physician appealed to the Supreme Court of Alabama.

The plaintiff, suffering from acute retention of urine due to a stricture of the urethra, consulted a Dr. Watson, who tried to relieve him with what is known as a rubber catheter. Failing in that, Dr. Watson made no further effort at treatment and advised plaintiff to go to a hospital. Instead the plaintiff went to the defendant's office and told him of the trouble and the method that Dr. Watson had used. Defendant replied that he thought he would be able to relieve him, so plaintiff placed himself on the operating table in the defendant's office. The defendant used steel instruments, first one size and then the other, and also what he called changing ends, and the plaintiff offered proof tending to show that the use of such steel instruments was improper unless there was sufficient opening in the urethra. The plaintiff testified that he was suffering much and that during the operation he bled to such an extent that he had to change clothes when he got home. During the night he was unable to sleep and the next morning was badly swollen. He then called in his family physician and was immediately sent to the hospital. At the hospital an operation was found necessary and it was discovered that the urethra had been fractured and the bladder punctured. Urine was in the scrotum, which was greatly swollen, in the tissues of his legs and in his abdomen as far up as his navel. Infection had set in. The plaintiff remained at the hospital under treatment for two months and was unable to do any work for some time thereafter. A witness who was present during the operation which the defendant performed testified that the defendant admitted he had had to use some 40 pounds of pressure in his treatment, and a physician who testified on behalf of the plaintiff stated that in a case involving a stricture of the urethra no pressure should be used. The defendant denied that he used excessive pressure, insisted that his instruments were appropriate for the purpose and that he used care and skill in the treatment and contended that the disastrous results were not due to his method of treatment but to the diseased condition of the plaintiff's bladder. He offered the testimony of other physicians to show that in some instances similar results have followed even though no such treatment had been given.

Reduced to the last analysis, said the Supreme Court, the question was whether the use of steel instruments and the pressure brought to bear by the defendant or the plaintiff's prior physical condition produced the unfortunate result. Whether or not the plaintiff's urethra and bladder, or either, were in any such decayed condition was a matter of speculation only since there was no proof tending to show it. The case of negligence here charged was clearly for the jury's consideration. Of course, the court continued, it is understood that in the absence of an expressed undertaking a physician or surgeon does not warrant a cure or a successful result and is not liable for an honest mistake or error of judgment in making a diagnosis or prescribing a method of treatment where the proper course is subject to reasonable doubt. Nor does the doctrine of res ipsa loquitur have application. The burden rests on the plaintiff to show negligence. It is not enough to show that an unfortunate result followed. On the basis of all the evidence, however, the court was of the opinion that no reversible error had been committed, that there was ample proof to sustain the verdict, and that it was not justified in disturbing the finding of the trial court. Accordingly the judgment in favor of the plaintiff was affirmed.—*Piper v. Halford, 25 So. (2d) 264 (Ala., 1946).*

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, July 20, Page 1021.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Montgomery, Jan. 21-23. Sec., Dr. B. F. Austin, 519 Dexter Ave., Montgomery 4.

ARIZONA: * Phoenix, 1st week in October. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

ARKANSAS: * Little Rock, Nov. 7-8. Sec., Medical Board of the Arkansas Medical Society, Dr. L. J. Kosminsky, Texarkana.

CALIFORNIA: Los Angeles, Aug. 5-8. Sec., Dr. F. N. Scatena, 1020 N. St., Sacramento 14.

DISTRICT OF COLUMBIA: *Reciprocity.* Washington, Sept. 9. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington.

FLORIDA: * *Examination.* Jacksonville, Nov. 26-27. Sec., Dr. Harold D. Van Schaick, 2736 S.W. 7th Ave., Miami 36.

GEORGIA: Atlanta, Oct. 8-10. Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta 3.

ILLINOIS: Chicago, Oct. 15-17. Sec., Dept. of Registration & Education, Mr. Philip Harman, Springfield.

INDIANA: *Examination.* Indianapolis, June 1947. Exec. Sec., Board of Medical Registration & Examination, Miss Ruth V. Kirk, 627 K. of P. Bldg., Indianapolis 4.

KENTUCKY: *Examination.* Louisville, Dec. 16-18. Sec., State Board of Health, Dr. P. E. Blackerby, 620 S. Third St., Louisville 2.

MARYLAND: *Examination.* Baltimore, Dec. 10-13. Sec., Dr. J. T. O'Mara, 1215 Cathedral St., Baltimore 1. *Homeopathic.* Baltimore, Dec. 10-11. Sec., Dr. J. A. Evans, 612 W. 40th St., Baltimore.

MICHIGAN: * Lansing, Oct. 9-11. Sec., Board of Registration in Medicine, Dr. J. E. McIntyre, 100 W. Allegan St., Lansing 8.

MINNESOTA: * Minneapolis, Oct. 15-17. Sec., Dr. J. F. Du Bois, 230 Lowry Medical Arts Bldg., St. Paul 2.

MISSISSIPPI: Jackson, Dec. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson 113.

MONTANA: Helena, Sept. 30-Oct. 2. Sec., Dr. O. G. Klein, First Nat'l Bank Bldg., Helena.

NEVADA: *Reciprocity.* Carson City, Aug. 5. Sec., Dr. G. H. Ross, 215 N. Carson St., Carson City.

NEW HAMPSHIRE: Concord, Sept. 12-13. Sec., Board of Registration in Medicine, Dr. John S. Wheeler, 107 State House, Concord.

NEW JERSEY: *Examination.* Trenton, Oct. 15-16. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.

NEW MEXICO: * Santa Fe, Oct. 7-8. Sec., Dr. LeGrand Ward, 141 Palace Ave., Santa Fe.

NEW YORK: *Examination.* Albany, Buffalo, New York & Syracuse, Oct. 7-10. Sec., Dr. Jacob L. Lochner, Education Bldg., Albany.

PENNSYLVANIA: *Examination.* Harrisburg, Oct. Act. Sec., Bureau of Professional Licensing, Dept. of Public Instruction, Mrs. M. G. Steiner, 351 Education Bldg., Harrisburg.

RHODE ISLAND: *Examination.* Providence, Oct. 3-4. Sec., Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH CAROLINA: Columbia, Nov. 11-12. Sec., Dr. N. B. Heyward, 1329 Blanding St., Columbia.

VIRGINIA: * Richmond, Dec. 3-6. Sec., Dr. J. W. Preston, 30½ Franklin Rd., Roanoke.

WYOMING: *Examination.* Cheyenne, Oct. 7-8. Sec., Dr. G. M. Anderson, Capitol Bldg., Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

DISTRICT OF COLUMBIA: *Examination.* Washington, Oct. 21-22. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington.

MICHIGAN: *Examination.* Ann Arbor, Oct. 11-12. Sec., Miss Eloise LeBeau, 101 N. Walnut St., Lansing.

MINNESOTA: *Examination.* Minneapolis, Oct. 1-2. Sec., Dr. Raymond N. Bieter, 105 Millard Hall, Univ. of Minnesota, Minneapolis 14.

NEBRASKA: *Examination.* Omaha, Oct. 1-2. Dir., Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9.

OREGON: Portland, Nov. 2. Sec., Mr. C. D. Byrne, Univ. of Oregon, Eugene.

RHODE ISLAND: *Examination.* Providence, Aug. 14. Sec., Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH DAKOTA: Sioux Falls, Dec. 6-7. Sec., Dr. G. M. Evans, Yankton.

WISCONSIN: *Examination.* Madison, Sept. 21. Sec., Prof. R. N. Bauer, 152 W. Wisconsin Ave., Milwaukee 3.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Ophthalmology, Cincinnati

29:515-644 (May) 1946

Bowen's Disease of Conjunctiva. V. R. Khanolkar.—p. 515.
Preglaucoma. H. S. Gradle.—p. 520.
Syndrome of Uveitis, Meningoencephalitis, Alopecia, Poliosis and Dysacousia: Report of Case Due to Actinomyces. R. D. Harley and E. S. Wedding.—p. 524.
Bilateral Uveitis with Retinal Detachment, Poliosis, Alopecia and Dysacousia. J. Laval.—p. 536.
Influence of Vehicles and Form of Penicillin and Sulfonamides on Mitosis and Healing of Corneal Burns. G. K. Smelser.—p. 541.
Overseas Ophthalmology. J. W. Henderson.—p. 551.
Removal of Adjacent Nevi of Eyelids. A. Callahan.—p. 563.
*Relationship of Rubella in Mother to Congenital Cataracts in Child. E. L. Goar and C. R. Potts.—p. 566.
Hysterical Amblyopia: Its Differentiation from Malingering. E. R. Yasuna.—p. 570.

Maternal Rubella and Congenital Cataracts.—Goar and Potts report 7 cases of congenital cataract observed in the Houston (Texas) area between July 1943 and December 1944. In all of them the cataract was accompanied by other defects, usually congenital heart lesions, poorly developed musculature and retarded mentality. Six of these were bilateral and 1 was unilateral. Six of the 7 mothers had had German measles in the early months of pregnancy. One mother whose baby had the syndrome gave no such history. The cataracts are typical in that the embryonic nucleus, which develops soon after the fibers are laid down, is affected. Five of the patients had both eyes operated on under ether anesthesia. Fair results were obtained in all cases. Secondary glaucoma did not occur. The author considers it advisable to operate on these infants within the first two or three months of life before nystagmus begins.

American Journal of Pathology, Ann Arbor, Mich.

22:433-664 (May) 1946

Odontogenic Tumors: Classification Based on Observations of Epithelial, Mesenchymal and Mixed Varieties. K. H. Thoma and H. M. Goldman.—p. 433.
Atypical Lichen Planus. J. Rosenthal.—p. 473.
Coexistent Pulmonary Asbestosis and Sarcoidosis. J. H. Skavlem and R. J. Ritterhoff.—p. 493.
Xanthomatosis of Arterial Media in Dog. F. Bloom.—p. 519.
Malignant Granulosa Cell Tumor with Pseudotubercles. H. J. Schattenberg and W. H. Harris Jr.—p. 539.
Dysgerminoma of Ovary. E. B. Potter.—p. 551.
Obliterative Cerebral Arteriosclerosis: Characteristic Vascular Syndrome. I. M. Scheinker.—p. 565.
*Central Nervous System in Pneumonia (Nonsuppurative Pneumonic Encephalitis): II. Pathologic Study. H. H. Noran and A. B. Baker.—p. 579.
Adenomatoid Transformation of Glomerular Capsular Epithelium. H. N. Eisen.—p. 597.
Bismuth Pigmentation: Its Histochemical Identification. M. Wachstein and F. G. Zak.—p. 603.
Ossifying Cartilage and Thrombi in Hearts of Rats. E. J. Farris, Eleanor H. Yeakel and Margaret M. Seitner.—p. 613.
Anomalous Portal Vein in Mice Occasionally Causing Intestinal Infarction. M. C. Boon.—p. 621.

Central Nervous System in Pneumonia.—Noran and Baker collected brains from 10 cases of pneumonic encephalitis in which complete necropsies were performed. In all instances evidence of encephalitis was established by microscopic study. The cerebral alterations were uniform throughout the entire series, even though the cause of the pneumonitis was highly variable. Extensive thrombosis and prominent perivascular hemorrhages were the principal microscopic findings in the nervous system. The prodigious number of thrombosed cerebral vessels suggests that some alteration in the clotting mechanism of the blood may cause these cerebral lesions. The constancy of the cerebral lesions, regardless of the type of pneumonia, indicates that the real cause of encephalitis may be the pulmonary tissue itself. Some factor from the lung parenchyma may possibly accelerate intravascular clotting.

Annals of Allergy, Minneapolis

4:79-162 (March-April) 1946

Contact Dermatitis as Problem in Army from Standpoint of Diagnosis and Treatment, with Presentation of Photographs and Discussion of Several Interesting Case Records. J. A. Rudolph.—p. 79.
Antigenicity of Proteins in Relation to Allergy. W. H. Welker.—p. 123.
DHE 45 (Dihydroergotamine) in Treatment of Allergic Migraine. N. W. Clein.—p. 128.
Fleabite Reactions: Clinical and Experimental Observations and Effect of Histamine-Azoprotein Therapy. M. M. Hartman.—p. 131.
Determination of Penicillin-Susceptible Strains of Bacteria. L. O. Dutton.—p. 137.
Nasal and Sputum Smears. L. O. Dutton.—p. 138.

Archives of Neurology and Psychiatry, Chicago

55:299-438 (April) 1946

Changes in Sensory Adaptation Time and After-Sensation with Lesions of Parietal Lobe. M. B. Bender.—p. 299.
Significance of Corneal and Pharyngeal Reflexes in Neurology and Psychiatry. M. Ostow and Miriam Ostow.—p. 320.
Hereditary Scleroses. O. Marburg.—p. 338.
Narcolepsy: II. Theory of Pathogenesis of Narcolepsy-Cataplexy Syndrome. H. D. Fabing.—p. 353.
Disturbances in Sleep Mechanism: Clinicopathologic Study: V. Anatomic and Neurophysiologic Considerations. C. Davison and E. L. Demuth.—p. 364.
Extensive Erosion of Base of Skull from Leptomeningeal Cyst: Report of Case. A. B. Soule Jr. and B. B. Whitcomb.—p. 382.
Paroxysmal Autonomic Crises in Postencephalitic State: Report of Case. C. I. Oller.—p. 388.

Archives of Pathology, Chicago

41:345-456 (April) 1946

*Pathologic Aspects of Acute Epidemic Hepatitis, with Especial Reference to Early Stages: Report of Series of 10 Cases, Including Case in Which There Was Spontaneous Rupture of Spleen and 6 Cases of Fulminating Disease in Patients Who Had Been Wounded Several Months Previously. D. A. Wood.—p. 345.
Chemical Factors and Their Role in Inflammation. V. Menkin.—p. 376.
Adenocarcinoma of Urachus Involving Urinary Bladder. A. E. Rappoport and C. E. Nixon.—p. 388.
Teratoma of Anterior Mediastinum in Group of Military Age: Study of 16 Cases, and Review of Theories of Genesis. H. G. Schlumberger.—p. 398.

Pathologic Aspects of Acute Epidemic Hepatitis.—In 8 of the 10 fatal cases of epidemic hepatitis reported by Wood the clinical course varied from two to ten days. It is suspected that in 5 or probably 6 of these cases the icterogenic agent was introduced in plasma or whole blood transfusions and that these cases constitute instances of "homologous serum jaundice." The livers showed changes similar to those of "acute yellow atrophy." At the earliest stage at which the lesions were examined (second day) the liver cells were swollen and detached from one another, and only minimal autolysis had occurred. By the tenth day most of the damaged liver cells had become autolyzed and the cellular débris had been removed. An accompanying inflammatory component, consisting chiefly of lymphocytes and monocytes, was most prominent in the earlier stages. Gross nodulation was either absent or minimal in the livers of patients who lived ten days or less. The spleen showed enlargement. In some instances necrosis was observed in the germinal centers of the splenic malpighian bodies and regional lymph nodes. The regional lymph nodes were enlarged and spongy and showed lymphadenitis. Arrest of spermatogenesis occurred, which in the majority of the cases in which the lesions were in an early stage was associated with orchitis. Interstitial pneumonitis was present in 2 instances. A mild type of meningoencephalitis was found in 1 instance and myocarditis in 1.

Blood, New York

1:185-270 (May) 1946

*Antianemic Properties of Thymine. T. D. Spies, W. B. Frommeyer Jr., C. F. Vilter and Ann English.—p. 185.
Acute Hemolytic Anemia and Hemoglobinuria Following Sulfadiazine Medication: Report of Case. J. F. Ross and Bertha L. Paegel.—p. 189.
Primary Polycythemia: Remissions Induced by Therapy with Radiophosphorus. L. A. Erf.—p. 202.
Prognosis in Neurologic Manifestations of Pernicious Anemia. R. W. Rundles.—p. 209.
Standardization of Quick Prothrombin Test with Reference to Statistical Significance of Variations in Prothrombin Concentration with Use of Stable Thromboplastin of High Potency. P. M. Aggeler, Joan Howard, S. P. Lucia, W. Clark and Alexis Astaff.—p. 220.
*Individual Blood Differences in Relation to Pregnancy, with Special Reference to Pathogenesis of Preeclamptic Toxemia. Jane G. Hurst, H. C. Taylor Jr. and A. S. Wiener.—p. 234.
Hematologic Effects of Splenectomy in Still-Chauffard-Felty Syndrome: Report of 2 Cases. J. S. Hirschboeck.—p. 247.

Antianemic Properties of Thymine.—Three patients with pernicious anemia were selected, hospitalized and given a diet devoid of meat and meat products. Daily large doses of thymine were given orally. The clinical and hematologic improvement in these 3 patients, according to Spies and his co-workers, was similar to that which follows administration of folic acid to patients with pernicious anemia in relapse. The exact mode of action of thymine is obscure, but it is possible that folic acid may act as an enzyme or co-enzyme in the synthesis of thymine or a thymine-like compound. Such synthesis may take place in the gastrointestinal tract. The present findings indicate that thymine (2,4-dioxo-5-methyl pyrimidine) has antianemic properties and a profound effect on the general metabolism of patients with pernicious anemia in relapse.

Blood Differences in Pregnancy.—Hurst and her associates took blood from patients eight days post partum and compared it with that studied ante partum. The titers of the isoagglutinins anti-A and anti-B in pregnant women at term did not differ significantly from the isoagglutinin titers in normal male adults. This indicates that pregnancy itself does not stimulate a rise in isoagglutinin titer. The frequency of incompatible blood groups in the infants of 31 mothers with toxemia of pregnancy was slightly higher than that in 166 infants of mothers without toxemia, but the difference was not statistically significant. Of 37 normal mothers whose infants had blood groups incompatible with theirs, 9 had a significant rise in isoagglutinin titer one week post partum. An appreciable rise in isoagglutinin titer occurred under similar circumstances in 6 of 9 mothers with toxemia. The series are too small to permit conclusions regarding the significance of this in relation to toxemia. It appears that under certain circumstances parturition can stimulate a rise in the maternal isoagglutinin titer. No correlation was found between the occurrence of Rh incompatibility and toxemia of pregnancy. The data obtained furnish additional evidence for the theory of multiple allelic genes of heredity of the Rh blood types and also Race and Taylor's theory of inheritance of the Hr factor.

Bulletin New York Academy of Medicine, New York

22:227-278 (May) 1946

Surgical Treatment of Chronic Duodenal Ulcer. J. W. Hinton.—p. 227.
Stimulus of War to Cardiology: Review. R. L. Levy.—p. 237.
Rationale of Portacaval Anastomosis. A. O. Whipple.—p. 251.
*Portacaval Anastomosis: Report on 14 Cases. A. H. Blakemore.—p. 254.
Review of 401 Cases of Early Ambulation. K. Canavarro.—p. 264.
Combined Penicillin and Heparin Therapy of Subacute Bacterial Endocarditis: Progress Report of First Seven Consecutive Successfully Treated Patients. L. Loewe, P. Rosenblatt, H. J. Greene.—p. 270.

Portacaval Anastomosis.—Blakemore reports observations on 14 patients in whom portacaval anastomosis was performed for the relief of portal hypertension. In 4 of these the site of the portal bed obstruction was extrahepatic, and in 10 it was intrahepatic as the result of portal cirrhosis. There were two operative deaths, both in cases of cirrhosis. Splenectomy and left nephrectomy with anastomosis of the splenic vein to the stump of the left renal vein has been performed six times. In 1 case the Carrel suture technic was employed and in five nonsuture technic was employed with vitallium tubes. In a boy with cavernomatous transformation of the portal vein who had previously had a splenectomy, the stump of the splenic vein was isolated and anastomosed to the vena cava, end to side. In the remaining 7 cases the portal vein was anastomosed to the vena cava, end to side (Eck fistula), the nonsuture technic with vitallium tubes being used. There was no reaccumulation of fluid in 3 of the 7 cases after operation. Two cases required paracentesis once and twice respectively. In the remaining 2, paracenteses were performed over increasing intervals for two and five months. The author stresses that, unless the operation is carried out with infinite care as to details, the chances of the portacaval shunt remaining patent are practically nil.

Cancer Research, Baltimore

6:225-288 (May) 1946

Cultural and Cytologic Characteristics of Human Tumors in Vitro. Jane Gillingham Royle.—p. 225.
Potassium and Calcium Content of Gastric Carcinoma. A. Brunschwig, Lucia Dunham and Sabra Nichols.—p. 230.
Potassium and Calcium Content of Carcinomas and Papillomas of the Colon. Lucia Dunham, Sabra Nichols and A. Brunschwig.—p. 233.
Relationship of Inherited Susceptibility and Inherited Hormonal Influence in Development of Mammary Cancer in Mice. J. J. Bittner and R. A. Huseby.—p. 235.
Comparative Morphologic Study of Mammary Glands with Reference to Known Factors Influencing Development of Mammary Carcinoma in Mice. R. A. Huseby and J. J. Bittner.—p. 240.
Methylcholanthrene Squamous Cell Carcinoma of Rat Prostate with Skeletal Metastases, and Failure of Rat Liver to Respond to Same Carcinogen. W. F. Dunning, M. R. Curtis and A. Segaloff.—p. 256.
Comparative Study of Ovaries of Virgin Mice of dba and C57 Black Strains. Elizabeth Fekete.—p. 263.
Factors Influencing Stability of Filtrable Agent of Chicken Leukosis and Sarcoma. R. G. Gottschalk.—p. 270.

Connecticut State Medical Journal, Hartford

10:377-460 (May) 1946

Prevention of Blindness. E. M. Blake.—p. 379.
Opportunity for Prevention of Blindness in Industry. P. W. Tisher.—p. 382.
Program and Responsibilities of Veterans Administration for Physical and Mental Health Resources for Veterans. D. Blain.—p. 384.
Medical Work at Newington Veterans Hospital. L. G. Beardsley.—p. 391.
Lesions of Female External Genital Tract Susceptible to Office Treatment. M. D. Speiser.—p. 395.
*Paroxysmal Cold Hemoglobinuria. B. R. Gendel and J. E. Benjamin.—p. 406.
Prefrontal Lobotomy: Review of Recent Literature. E. B. Brody and B. E. Moore.—p. 409.

Paroxysmal Cold Hemoglobinuria.—Gendel and Benjamin report 2 cases of paroxysmal cold hemoglobinuria in 2 Negro privates aged 25 and 34 with late syphilis. Cold hemoglobinuria was present for seventeen and eight years respectively without any other deleterious effect on the patients' health. The men did not respond to standard treatment with oxophenarsine hydrochloride and bismuth or to subsequent treatment with penicillin. Both patients continued to have attacks of spontaneous cold hemoglobinuria. The attacks could be precipitated by the Rosenbach test, and the autohemolysin could be demonstrated in the serum.

Indiana State Medical Assn. Journal, Indianapolis

39:209-264 (May) 1946

Gerontology and Eye, with Some Remarks on Old Age. C. W. Rutherford.—p. 209.
Uveitis in Some Systemic Diseases. C. J. Rudolph.—p. 212.
Notes on Glaucoma for General Practitioner. E. W. Dyar.—p. 216.
Penicillin in Ophthalmology. C. L. Mahoney.—p. 218.
Myopia and the School Child. M. S. Harding.—p. 219.
Progress in Industrial Ophthalmology. Hedwig S. Kuhn.—p. 221.
Concomitant Squint. J. W. McEwen.—p. 223.
Sore Eyes. H. B. Smith.—p. 226.
Some Problems of Lighting. C. A. Robison.—p. 228.

Journal of Experimental Medicine, New York

83:355-440 (May) 1946

Plasma Substitutes: Human and Animal Globin Related to Production of Hemoglobin and Plasma Protein; Dog Hemoglobin Utilization Improved by Methionine but Not by Isoleucine. Frieda S. Robscheit-Robbins, L. L. Miller, E. L. Alling and G. H. Whipple.—p. 355.
Absence of Antibody in Macrophages During Maximum Antibody Formation. W. E. Ehrich, T. N. Harris and E. Mertens.—p. 373.
Activation of Skin Grafts. P. Rous.—p. 383.
Effect of High Pressures on Hemagglutinating Antibodies. W. C. Boyd.—p. 401.
Factors Affecting Growth of Tubercle Bacilli in Liquid Media. R. J. Dubos and B. D. Davis.—p. 409.
Site of Angiotonin Destruction. L. A. Sapirstein, R. K. Reed and E. W. Page.—p. 425.

Journal of Lab. and Clinical Medicine, St. Louis

31:499-608 (May) 1946

Reflex Shortening of Esophagus in Experimental Animal with Production of Esophageal Hiatus Hernia. F. L. Dey, N. C. Gilbert, Ruth Trump and R. C. Roskelley.—p. 499.
Comparison Between Values for Plasma or Serum Protein as Obtained by Specific Gravity and Micro-Kjeldahl Methods. Margaret A. Adams and Alice N. Ballou.—p. 507.
Studies on Streptomycin: I. Assay in Body Fluids. J. Forgacs, G. B. Kornegay and T. F. Henley.—p. 514.
Id.: II. Blood Levels and Urinary Excretion in Man and Animals. G. B. Kornegay, J. Forgacs and T. F. Henley.—p. 523.
*Study of Diffusion of Penicillin Across Serous Membranes of Joint Cavities. H. L. Hirsh, H. L. Feffer and C. Barbara O'Neil.—p. 535.
Outbreak of Hemolytic Streptococcus Throat Infection Controlled by Sulfadiazine. R. B. Lindberg, F. R. Coyle, G. T. Rich and M. Bayliss.—p. 544.
Serologic Diagnosis of Endemic Typhus: III. Incidence and Titer of Complement Fixing Antibodies in Random Samples of Population in Endemic and Nonendemic Typhus Areas. Mary B. Johnston and S. R. Damon.—p. 550.
Interpretation of Findings in Cerebrospinal Fluid: II. Technic and Systematic Interpretation of Albumin-Globulin Ratio in Cerebrospinal Fluids. C. Lange.—p. 552.
Influence of Dimethylaminoethyl Benzhydryl Ether Hydrochloride (Benadryl) on Normal Persons and on Those Suffering from Disturbances of Autonomic Nervous System: Preliminary Report. T. H. McGavack, H. Elias and L. J. Boyd.—p. 560.
Application of Rh Blood Types and Hr Factor in Disputed Parentage. A. S. Wiener.—p. 575.
Relation of Physiologic Variables to Circulation Time. H. A. Bailey, L. W. Dumas and R. W. Lackey.—p. 584.

Diffusion of Penicillin Across Serous Membranes.—Hirsh and his associates injected penicillin into the knee joint or administered it systemically and made assays on the joint fluid and serum to determine the amount of penicillin diffusing across the serous membrane of the joint cavity. Similar studies were done while the patient was under treatment in a fever cabinet to ascertain whether high temperatures would have an influence. The patients studied had rheumatic fever or rheumatoid, gonococcic and other pyogenic arthritides. In order to determine whether there was a difference in the diffusion of penicillin into joint fluid from the blood in diseased and normal joints, several patients receiving penicillin, but with no evidence of joint disease, were given up to 100 cc. of isotonic solution of sodium chloride into a knee joint, and this fluid was used for penicillin assay. The authors found that penicillin will diffuse across the serous membranes of joints when given systemically or intra-articularly. Low concentrations of penicillin in the joint fluid following the systemic administration and in the blood following intra-articular injection were obtained in a significant number of studies.

Minnesota Medicine, St. Paul

29:393-528 (May) 1946

Mice, Men, Malignancy. L. C. Strong.—p. 413.
Effect of Prostigmine in Cerebral Palsy. J. F. Pohl.—p. 419.
Malaria. D. E. Nolan, H. Warshawsky and G. W. Pedigo Jr.—p. 423.
Malaria in Minnesota. T. B. Magath.—p. 427.
*Cystic Fibrosis of Pancreas. T. B. Merner, J. F. Bosma and A. J. Moss.—p. 429.
New Method for Cutting Full Thickness or Split Thickness Skin Grafts. A. E. Ritt.—p. 437.

Cystic Fibrosis of Pancreas.—Merner and his associates call attention to a clinical entity which, though adequately described only recently, is frequently encountered in the practice of pediatrics. Eight typical cases of cystic fibrosis of the pancreas have been selected from those observed at the University of Minnesota Hospitals during the past few years. Cystic fibrosis manifests itself by steatorrhea, dwarfism and chronic respiratory infection. Pathologically it is characterized by obstruction of the ducts of the pancreas, the salivary glands and the trachea and bronchi, with resulting secondary changes. Its etiology has not been proved. The clinician should investigate any case in which steatorrhea and respiratory symptoms are present with this diagnosis in mind. The roentgenologist can be of great assistance. The intestinal symptoms and the nutritional loss are improved by a diet low in fat and high in protein. The chronic pulmonary condition is benefited by periodic postural drainage. With the use of penicillin therapy these children now frequently survive the recurrent episodes of pneumonia to which they usually have succumbed. The greatest known age of survival at the present time is fourteen years.

New England Journal of Medicine, Boston

234:491-518 (April 11) 1946

Alternating Pleurisy with Effusion as Manifestation of Tuberculosis: Report of 7 Cases. K. T. Bird.—p. 491.
Intestinal Obstruction Following Abdominal Battle Wounds. P. S. Foisie.—p. 498.
Successful Treatment of Severe Diabetic Coma Complicated by Chronic Laryngeal Obstruction: Report of Case. Rosemary V. Gorman, R. Harwood and P. D. White.—p. 500.
Surgery of Heart and Structures Related to It. J. W. Strieder.—p. 504.
Multiple Abscesses, Pericecal, Hepatic and Pulmonary. Actinomycosis of Lungs.—p. 508.
Colloid Cyst of Third Ventricle.—p. 511.

New York State Journal of Medicine, New York

46:673-832 (April 1) 1946

Disorders of Blood-Forming Organs. E. G. Allen.—p. 721.
Analysis of 200 Cases of Arthritis Admitted to Army General Hospital. K. Goldstein.—p. 727.
Penicillin in Treatment of Vincent's Angina. L. H. Bronstein.—p. 735.
Clinical Diagnosis of Coronary Artery Sclerosis. A. S. Ferguson.—p. 737.
Coarctation of Aorta: Report of 5 Cases. R. Schwartz.—p. 739.
Pregnancy Following Treatment with Male Sex Hormone in Sterility Due to Functional Bleeding. A. F. Simon.—p. 743.
Penicillin in Acute Cholecystitis. R. Rosenthal.—p. 744.
Safety Switch for Short Wave Machine. I. Klein.—p. 746.

46:833-944 (April 15) 1946

Streptomycin in Treatment of Case of Persistent Urinary Infection. H. G. Jacobi.—p. 883.
Conservative Treatment of Pilonidal Cyst. B. G. P. Shafiroff and H. Doubilet.—p. 891.
Problems of Peptic Ulcer in Armed Forces and in Returned Soldiers. A. L. Garbat.—p. 894.
Obstetric Forceps. L. A. Bunim.—p. 902.
Problems in Preventing Infections in Newborn Nurseries. S. Frant, H. Abramson and Margaret Losty.—p. 908.
*Congenital Hemolytic Disease and Erythroblastosis Fetalis: Two Disease Syndromes—Preliminary Report. A. S. Wiener.—p. 912.
Ventricular Fibrillation Persisting Thirty Minutes After Clinical Death. W. Horowitz and J. Burstein.—p. 914.
Sequelae Following Oral and Topical Use of Penicillin. L. Kleinfeld.—p. 915.
Acute Lupus Erythematosus Disseminata Treated with Penicillin. M. H. Morris.—p. 917.

Congenital Hemolytic Disease and Erythroblastosis Fetalis: Two Syndromes.—The manifold clinical manifestations of erythroblastosis fetalis have been explained by the discovery that persons sensitized to agglutinogens, such as Rh, A, B and Hr, may form two sorts of antibodies, namely agglutinins (bivalent antibodies) and blocking antibodies or glutinins (univalent antibodies). The clinical manifestations depend on which variety of antibody is present in the maternal serum, erythroblastosis fetalis actually comprising two clinical syndromes. In the first syndrome, congenital hemolytic disease with anemia and/or hydrops, the maternal serum contains univalent isoantibodies (blockers or glutinins). If only small amounts are present in the maternal serum the infant will usually be born alive with anemia or will develop anemia shortly after birth. Such patients usually recover after proper blood transfusion. In the second syndrome, erythroblastosis with icterus gravis and kernicterus, the agglutinins are presumably larger molecules than the blocking antibodies and these rarely traverse the placenta during pregnancy. During labor and delivery, owing to the increased intrauterine pressure, agglutinins may be milked into the fetal circulation. At birth the infant may appear normal, but the agglutination of red cells in the smaller vessels causes thrombi with resulting damage to the liver, brain or other organs. The infant develops deep jaundice, becomes stuporous, takes its feedings poorly and may have convulsions, with coma and death supervening. The rare infants that survive may develop symptoms of a severe neurologic disorder characterized by choreoathetosis, frequently together with mental deficiency. Postmortem examination in these "toxic" infants, who die shortly after birth, reveals the presence of generalized icterus, splenomegaly, hepatomegaly and kernicterus.

Public Health Reports, Washington, D. C.

61:625-664 (May 3) 1946

Modalities of Bed Rest. W. M. Peck.—p. 626.
Review of Tuberculosis Control Demonstrations and Program of Grants-in-Aid. F. J. Weber.—p. 643.
Isolation of Mycobacterium Tuberculosis from Gastric Contents Neutralized After Varying Periods. Marian G. Sprick and J. W. Towey.—p. 648.

61:665-696 (May 10) 1946

How Does Housing Affect Health? M. A. Pond.—p. 665.
Comparative Assays of Rodenticides on Wild Norway Rats: I. Toxicity. Sally H. Dieke and C. P. Richter.—p. 672.
Malaria: Numbers of Cases Reported by State Health Officers in 1945 as Compared with Similar Data for Years 1939-1944. B. C. Hampton.—p. 679.
Chlorine as Possible Ovicide for Aedes ægypti Eggs. S. P. Hatchett.—p. 683.
Aedes Tortilis (Theobald), Mosquito New to United States. A. E. Staebler and W. F. Buren.—p. 685.

Rocky Mountain Medical Journal, Denver

43:273-356 (April) 1946

Practical Gynecologic Endocrinology. E. Stewart Taylor.—p. 292.
Extra-Sanatorium Pneumotherapy: Aid in Management of Active Pulmonary Tuberculosis. A. Rest.—p. 299.
Abdominal Puncture: Practical Aid in Diagnosis. H. E. Campbell.—p. 305.

43:357-440 (May) 1946

Role of Anesthesiologist in Prevention and Treatment of Thrombophlebitis. A. A. Wearner.—p. 376.
Surgical Management of Gastric and Duodenal Ulcers. R. Woodruff.—p. 380.
Extrapleural Pneumothorax: Its Limited Usefulness. S. M. Reckler and R. E. Dwork—p. 385.
Use of Omentum as Pelvic Diaphragm Following Resection of Perforating Carcinoma of Rectosigmoid. R. C. Derbyshire.—p. 388.

United States Naval Med. Bulletin, Washington, D. C.

46:623-792 (May) 1946

Medical Aspects of Blast. E. L. Corey.—p. 623.
Pinta-like Lesions Among Natives of Guam. R. F. Allen and R. H. Goodale.—p. 653.
Impressions of Prisoner of War Medical Officer in Japanese Concentration Camps. M. L. Gottlieb.—p. 663.
Segregated Training for Recruits with Minor Orthopedic Disabilities and Complaints. L. O. Parker and K. V. Kaess.—p. 676.
Psychotic Naval Prisoner. O. A. Will Jr.—p. 680.
Mental Defective and Under-Age Man in Navy. H. R. Otness.—p. 690.
Method for Practicing Preventive Psychiatry in Naval Personnel Separation Center. L. L. Hasenbush.—p. 696.
Shigellosis Studies: II. Resistance of Shigella Flexneri II to Therapy with Sulfadiazine. B. V. White Jr., C. M. Thompson, W. L. Shafer and M. A. Jacobson.—p. 704.
*Failure of Type Specific Streptococcus Pyogenes Vaccine to Prevent Respiratory Infections. D. C. Young, B. B. Breese and others.—p. 709.
*Traumatic Rupture of Adductor Muscles of Thigh. G. Crile Jr.—p. 719.
*Traumatic Ossifying Myositis. C. Howard.—p. 724.
1,265 Pneumonia Cases with No Deaths. G. J. Kaske.—p. 731.
Effect of Blood Donations on Blood Pressure of Hypertensives. J. W. Edwards and J. L. Bordenave.—p. 736.
Intravenous Administration of Morphine Tartrate. F. H. Bowen.—p. 740.

Streptococcus Pyogenes Vaccine.—Young and other members of Epidemiology Unit 22 made an attempt to prevent Streptococcus pyogenes infections in three different experiments at the Farragut Naval Training Center by the use of type specific vaccine. Type 19 heat killed vaccine, type 19 ultraviolet killed vaccine and a combined type 17 and type 19 heat killed vaccine were used. No reduction in total respiratory illness or Streptococcus pyogenes illness was noted. Furthermore, type 19 infections occurred as frequently in the vaccinated group as in the controls.

Rupture of Adductor Muscles of Thigh.—Crile says that in the past year 3 so-called hernias of the adductor muscles of the thigh have been seen at the U. S. Naval Hospital, San Diego. A muscle hernia retracts when the muscle is tensed and bulges when the muscle is relaxed. But in the so-called adductor muscle hernia the opposite is true. The bulge is not obvious when the muscle is relaxed and appears only when the adductor muscles of the thigh are tensed. The so-called adductor muscle hernia is not a hernia at all but is a ruptured muscle. Trauma causes a rupture of the belly of one or more of the muscles of the adductor group. The ends of these muscles retract. The upper end of the muscle retains its innervation and continues to function, but it is torn loose from its insertion and it therefore contracts into a thick mass on the upper inner aspect of the thigh. This mass disappears when the muscle is relaxed and reappears when it is contracted. Pain and weakness of the affected thigh are common complaints. Correction of this deformity cannot be accomplished by repair of a supposed defect in the fascia. In early cases it is possible that good results could be obtained by repair of the ruptured muscle, but in late cases atrophy, contraction and fibrosis make it impossible to effect a satisfactory repair. Conservative treatment and reassurance are recommended for patients with ruptured adductor muscles. If the presence of the mass is of cosmetic importance it can be excised, but the symptoms may not be relieved.

Traumatic Ossifying Myositis.—Various theories have been advanced to explain the development of these localized bone growths. In cases reported by Howard the areas were all in contact with bone. This would favor the theory of a periosteal injury with escape of osteogenic cells from the periosteum. Four cases of myositis ossificans were found following football injuries and 1 case following an injury incurred while playing soccer. Therapy for these cases consisted in prompt application of an ice pack. A roentgenogram was taken to rule out fracture. On the following day heat treatment was begun, with a fifteen minute immersion in the whirlpool bath followed by a short wave treatment. These treatments were given twice daily for the first week. If the mass did not absorb within ten days or two weeks, a second x-ray examination usually revealed some soft tissue calcification. Heat therapy was continued when this condition was found and serial x-ray films were taken to check on the progress of ossification. These serial films showed a progressive increase in density of the calcification and a gradual reduction in size. Two cases were followed up for six months. None of these cases showed a complete disappearance of the ossification. The authors cite reports of sarcomatous degeneration of ossifying myositis which point to the possibility of some of these conditions suddenly undergoing malignant changes.

Wisconsin Medical Journal, Madison

45:465-568 (May) 1946

Treatment of Allergic Conditions with Pyribenzamine and Benadryl. S. Epstein.—p. 489.
Treatment of Undulant Fever with Streptomycin. J. R. Goelz.—p. 496.
Physical Examination of School Employees, with Special Reference to Tuberculosis. A. A. Pleyte.—p. 497.

Yale Journal of Biology and Medicine, New Haven

18:319-472 (May) 1946

Harvey, Riolan and Discovery of Circulation of Blood. J. E. Donley.—p. 319.
Mammary Tumor Agent and Its Implication in Cancer Research. H. B. Andervont.—p. 333.
Changes in Liver Function During Experimentally Induced Human Hepatitis. V. A. Drill.—p. 345.
Genetic Analysis of Induction of Tumors by Methylcholanthrene: XIII. Mutation from Brown to Black with Concomitant Increase of Susceptibility to Fibrosarcoma. L. C. Strong.—p. 359.
Electroencephalographic Changes After Eye Opening and Visual Stimulation. F. C. Redlich, A. Callahan and R. H. Mendelson.—p. 367.
*Benzyl Penicillin: Failure to Sterilize Blood in Subacute Bacterial Endocarditis. A. J. Geiger and J. R. Goerner.—p. 377.
Eosinophilia, Ancylostomiasis and Strongyloidosis in South Pacific Area. A. A. Liebow and Clair A. Hannum.—p. 381.
Salt Depletion, Peripheral Vascular Collapse and Treatment of Diabetic Acidosis. T. S. Danowski, A. W. Winkler and J. P. Peters.—p. 405.
Possibility of Detecting Individual Proteins in Blood Serum by Differentiation of Solubility Curves in Concentrated Sodium Sulfate Solutions. C. L. H. Majoor.—p. 419.
Housing, Care and Surgical Handling of Laboratory Primates. Margaret A. Kennard, T. C. Ruch and J. F. Fulton.—p. 443.

Benzyl Penicillin in Bacterial Endocarditis.—A patient with chronic bacteremia was given massive oral doses of benzyl penicillin. The blood was not sterilized, although it had been regularly cleared of the infecting organism (Streptococcus viridans) by parenteral administration of penicillin in daily doses of 250,000 units. The observations indicate that orally administered benzyl penicillin does not produce an effective concentration of penicillin in the blood in man, and in this respect a species difference from rodents is implied. Should the drug have proved as effective in maintaining sterility of the blood as did sodium and calcium penicillin given parenterally, the patient could conceivably have been kept indefinitely in a state of therapeutic remission even though not cured of his infection.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Dermatology and Syphilis, London

58:45-96 (March-April) 1946

Treatment of Lupus Vulgaris with Calciferol. G. B. Dowling and E. W. Prosser Thomas.—p. 45.
Dermatomyositis and Malignant Tumor. A. Dostrovsky and F. Sagher. —p. 52.
Scabies Norvegica in Native of East Africa. F. Piers and G. L. Timms. —p. 61.

British Medical Journal, London

1:673-710 (May 4) 1946

Cross Infection in Children's Wards: Report Presented to British Pediatric Association. V. D. Allison, R. B. Bourdillin, W. S. Craig and others.—p. 673.
Nutrition in Vienna in November, 1945. M. Pyke.—p. 677.
*The "Ionization" of Penicillin. J. L. Hamilton-Paterson.—p. 680.
Difference in Effect of Scopolamine on Peroral and Subcutaneous Administration. S. Lomholt.—p. 682.
Carcinoma of Rectum in Sisters. R. E. Rewell.—p. 683.

"Ionization" of Penicillin.—The practice of using solutions of penicillin by ionization seems to be increasing, and some investigators have used this method for eye infections and have claimed satisfactory results. Hamilton-Paterson thinks that before these results can be accepted it must be shown that penicillin in solution behaves as an electrolyte. A series of experiments was therefore designed to test this hypothesis, and the results suggest that it is untenable. One experiment indicated that penicillin is either a nonconductor or a very poor conductor. It has been impossible to demonstrate any movement of penicillin under the influence of an electric current. The presence of the products of electrolysis of sodium chloride in the in vitro experiments led to the rapid destruction of penicillin. It is not known how far this observation can be applied to in vivo methods.

Journal of Royal Naval Medical Service, London

31:195-272 (Oct.) 1945

Salt Deficiency States in Tropical Climates. J. C. Stenning.—p. 195.
Biliary Colic and Chronic Pancreatitis. R. J. Willan.—p. 211.
Pseudoleukemic Eosinophilia Complicated with Gangrenous Appendicitis as Possible Manifestation of Infectious Mononucleosis, with Observations on Mutual Antagonism Between Lymphocytes and Granulocytes. J. W. L. Crosfill.—p. 215.
Traumatic Lesions of Spinal Cord. M. A. Rugg-Gunn.—p. 228.
Summer Tour in Persian Gulf. C. N. H. Joynt.—p. 237.
Remarks on Acclimatization. M. Critchley.—p. 245.
Psychiatric Survey of Naval Personnel. J. F. Burdon.—p. 248.
Recent Advances in Malaria Control. E. J. Mockler.—p. 252.
*Apparent Lack of Response to Quinine and Mepacrine in Cases of Subtertian Malaria. A. G. G. Toomey.—p. 254.
Traumatic Aneurysm of Femoral Artery. R. D. N. Bisset.—p. 257.
Prickly Heat and Tropical Pemphigus. A. M. Robertson.—p. 258.

Lack of Response to Quinine and Quinacrine in Subtertian Malaria.—According to Toomey, subtertian malaria usually responds readily to quinine and quinacrine, the fever commonly subsiding after the first or second paroxysm. He observed 21 patients in whom the response to antimalarial treatment was not quite as expected. The apparent failure of response was ascribed to nonabsorption of the appropriate drugs or to superadded infection of another type. Sulfathiazole was tried empirically in the latter group with good results. No ill effects were observed following administration of sulfathiazole concurrently with full doses of quinine and quinacrine. Four of these cases are described.

Medical Journal of Australia, Sydney

1:457-492 (April 6) 1946

Psychiatric Program for Peace. R. S. Ellery.—p. 457.
Radiographic Analysis of Spondylolisthesis. I. Meschan.—p. 465.
Staphylococcic Enteritis in Children. F. Draper and Geraldine W. Brown.—p. 469.
Tuberculin Patch Test: Comparison with Mantoux Test. Catherine Hudson and F. E. Hytten.—p. 475.
Blood Groups in Tasmania. C. Duncan.—p. 475.

Proceedings of Royal Society of Medicine, London

39:291-354 (April) 1946. **Partial Index**

Dysplasia Epiphysealis Multiplex. H. A. T. Fairbank.—p. 315.
Cerebral Palsy. E. S. Evans.—p. 317.
*Pillion Fractures. F. Radcliffe.—p. 320.
Analysis of Failures of Smith-Petersen Operation for Fracture of Femoral Neck. G. O. Tippett.—p. 322.
Epidemiology of 1945 Outbreak of Poliomyelitis in Mauritius: Summary. A. M. McFarlan.—p. 323.
Retropubic Prostatectomy. T. Millin.—p. 327.
Detection and Evolution of Adolescent Deformities of Spine. F. H. Kemp.—p. 342.

Pillion Fractures.—According to Radcliffe, pillion fracture is a comminuted T shaped fracture of the lower end of the femur, with separation of the condyles and displacement of the condyles behind the shaft of the femur. The author reports 3 cases in which a motorcycle and pillion rider had a collision with a truck. The motorcycle had almost avoided the truck on rounding a corner when the knee of the pillion rider, in a typical position, took the whole weight of the impact. The force came against the patella, which was driven almost like a wedge against the condyles of the femur, splitting them apart and detaching them from the shaft, and then the leg, knee and condyles were driven up under the shaft. The treatment illustrates the value of the recent advances in technic—careful wound toilet, penicillin and early closure by secondary suture and/or skin graft—so reducing what was once a formidable compound fracture to a routine procedure.

Journal de Chirurgie, Paris

61:233-320 (No. 10-12) 1945

Ureterocolic Implantation for Exstrophy of Bladder: 5 Cases. R. Fontaine and D. Ambard.—p. 233.
*Interventions on Sympathetic in Recent Ligations of Great Arterial Trunks of Extremities. G. Arnulf.—p. 241.
Postoperative Fatalities After Craniocerebral Wounds Caused by War Projectiles: 48 Cases. T. Kammerer, P. Stricker and J. Messerschmitt.—p. 246.
Trepan Holes in Traumatic Juxtadural Hematomas: Indication, Technic and Therapeutic Possibilities. G. Guiot.—p. 252.

Sympathetic Therapy in Recent Ligatures of Large Arterial Trunks.—Arnulf observed 28 cases of wounds of the large arterial trunks of the extremities. He has resorted to various interventions on the sympathetic, such as infiltration of ganglions, intra-arterial injections, arteriectomy and the various types of sympathectomies. Frequently the various procedures have been combined to obtain the maximum vasodilatory effect. Experience has shown that the interventions on the sympathetic must be made very early; it is the best antidote to the undesirable effects of ligation. Although not a panacea, it can often turn the balance in a favorable direction. Everything should be done to avoid ligation; arterial suture should be done whenever the lesions permit.

Belgisch Tijdschrift voor Geneeskunde, Louvain

2:169-232 (April) 1946

Urologic Hypertension. F. Van Goidsenhoven and J. Vandenbroucke. —p. 169.
*Icterohemorrhagic Spirochetosis, or Weil's Disease. E. Verstraeten. —p. 176.
Survey over Insecticides: Recent Innovations. A. Bessemans.—p. 189.

Weil's Disease.—Verstraeten reports 4 cases of icterohemorrhagic spirochetosis (Weil's disease) which recently occurred in the region of Ghent. The patients developed the disease after swimming and presented atypical symptoms. In the first patient nephritic symptoms predominated. Meningitic symptoms were prominent in the second case and icterus seemed of secondary importance. The third patient had jaundice and all symptoms of cholemia. The fourth patient presented the most typical picture; he had meningitic, renal and icteric symptoms. Therapeutic measures to be successful require early diagnosis. French observers obtained success with the antispirochetosis serum of Petit, and others have obtained satisfactory results from the early administration of the immune serum of Uhlenhut and Fromme. Convalescent serum has also been recommended by some, whereas others do not regard it of value. Among symptomatic measures the author recommends antipyretics and measures that protect the liver.

Dermatologica, Basel

92:85-164 (No. 2 & 3) 1946. **Partial Index**

Clinical Investigations on Resorption of White Mercury Precipitate Ointment Through Intact Skin and Ulcerous Wound Surfaces. P. Robert.—p. 85.
Scabies Norvegica: Case. E. Börlin.—p. 108.
Sauna Baths in Treatment of Disturbances of Peripheral Blood Perfusion. W. Burckhardt and W. Vollmar.—p. 116.
Systemic Action of Sulfonamides. R. Schuppli.—p. 135.
*Cutaneous Changes in Porphyria. H. Kuske.—p. 149.
Alcohol in Treatment of Anogenital Pruritus. C. Böhm.—p. 160.

Cutaneous Changes in Porphyria.—A woman in whom chronic porphyria was accompanied with cutaneous changes of the type of hydroa vacciniformis and abdominal and psychic symptoms exhibited repeatedly manifestations of photosensitization which largely corresponded to the picture of experimental hematoporphyrin sensitization in human subjects. In addition to the actinic vesicles there also existed at times blisters due to mechanical trauma. The increased sensitivity of the skin to trauma complicates the clinical picture of hydroa. Photosensitization may prepare the skin for the development of vesicular cutaneous changes following mechanical traumas. However, a part of the blisters are the direct result of impairment by rays. Nothing is known about the anatomic or histochemical bases of the abnormal sensitivity of the skin. Kuske is unable to state whether the photosensitivity in porphyria depends on wavelengths. In periods when the patient had no porphyrinuria she had normal or even reduced sensitivity to ordinary mercury light, but she seemed to be hypersensitive to filtered ultraviolet light of long wavelengths.

Schweizerische medizinische Wochenschrift, Basel

76:65-84 (Jan. 26) 1946. **Partial Index**

*Treatment of Pulmonary Embolism by Means of Local Anesthesia. K. Lange.—p. 65.
Two Cases of Autochthonous Malarial Infection in Switzerland. R. Guhl.—p. 67.
Periarthritis Coxae. W. Belart.—p. 69.
Investigations on Pharmacodynamic Properties of Histidine. E. Aron and A. D. Herschberg.—p. 71.
Impairment of Myocardium in Focal Infection. Dora Glatthaar.—p. 74.

Local Anesthesia in Treatment of Pulmonary Embolism.—Lange found that pulmonary embolism can often be counteracted by the intrapleural injection of from 20 to 30 cc. of a 0.5 per cent solution of procaine hydrochloride. The injection is at the site of pain. The amount of procaine depends on the extent of the embolism and on whether it is isolated or multiple. From 5 to 50 cc. may be necessary. Because of the great sensitivity of the pleurae, the anesthetic becomes effective after some seconds: the patient is again able to breathe, the pain disappears, he is able to cough, dyspnea, restlessness and anxiety disappear, and the patient feels saved. Although the method does not prevent further embolisms, it generally prevents the postembolic complications. No bloody sputum, no bronchitis, no bronchopneumonia and no pleurisy appear, and consequently no empyemas or pulmonary abscesses develop. There are some exceptions to this, particularly in septic infections.

76:165-188 (March 2) 1946

Surgical Treatment of Tuberculous Cervical Lymphoma. E. Kaiser.—p. 165.
Case of Myiasis Caused by Larva of Hypoderma. M. Lauterburg-Bonjour.—p. 168.
*Perichondritis of Larynx After Use of Indwelling Duodenal Tube in Ulcer of Stomach. W. Hippenmeier.—p. 170.
Chemotherapy for Intoxication with Typhus Rickettsia and Its Inhibition by Para-Aminobenzoic Acid. E. Berger and S. Brzezinski.—p. 173.
Reflex on Stimulating Distal Portion of Ball of Foot: Reply to M. Klingler's Article on Previous History of Patellar Reflex in S. M. W. 1945, p. 1132. K. Lenggenhager.—p. 174.
Cell Specific Autoagglutinins as Regulators of Cytologic Structure of Blood (Cytoordines). L. Fleck.—p. 175.
Problem of Biliary Peritonitis Without Perforation. A. Schärer.—p. 177.
Fatal Alcohol Poisoning by Enema in Children. Maria Wagner-Schellenberg.—p. 179.

Perichondritis of Larynx from Indwelling Duodenal Tube.—Hippenmeier reports 2 cases of perichondritis of the larynx with secondary laryngeal stenosis in a woman aged 47 with ulcer of the stomach and in a man aged 45 with ulcers of stomach and duodenum. Both patients were placed on jejunal feeding by means of an indwelling duodenal tube. Although early mild laryngeal symptoms such as pain and hoarseness may occur while the indwelling tube is still in place, dyspnea and dysphagia may develop several days to one month after the removal of the tube. Dyspnea suggests that the perichondritis is far advanced. High tracheotomy for subglottic stenosis was performed in both of the author's cases. Perichondritis of the cricoid cartilage, subglottic stenosis, arytenoid fixation and paralysis of the posterior cricoarytenoid muscle may result. The employment of an indwelling tube in the esophagus should be limited to cases in which it is imperative. Thin, elastic, soft tubes must be used; they should be directed outward through the nostrils, and the patients should be under laryngologic control so that the tube may be removed at once when mild laryngeal pain or inflammatory changes are present.

Policlinico (Sez. Prat.), Rome

52:177-220 (March 4-11) 1946. **Partial Index**

*Tuberculous Appendicitis in Pulmonary Tuberculosis. G. Scotti.—p. 185.

Tuberculous Appendicitis in Pulmonary Tuberculosis.—Tuberculous appendicitis is rare. As a rule it is secondary to early pulmonary tuberculosis. It frequently coexists with intestinal tuberculosis. The symptoms are the same as those of chronic or acute appendicitis. Scotti reports 13 cases in adults. Appendectomy resulted in great improvement of abdominal symptoms and of the patients' general condition. Guinea pigs inoculated with material from the removed appendix did not develop tuberculosis. Tubercle bacilli were not identified in the removed specimens. The anatomicopathologic lesion was typical of tuberculosis with progressive phases of perivascular and perilymphatic granulation, sclerosis, formation of minute abscesses, scar tissue and ulceration. The good results of early appendectomy were verified by the satisfactory condition of the patients four years after appendectomy.

Archivos de la Soc. de Biol., Montevideo

12:151-198 (June-Sept.) 1945. **Partial Index**

*Penicillin in Purification of Smallpox Vaccine. C. Díaz Romero.—p. 152.

Penicillin in Purification of Smallpox Vaccine.—Díaz Romero vaccinated against smallpox a group of nonvaccinated persons in the course of penicillin therapy for syphilis. The therapy consisted in daily administration of 100,000 Oxford units for ten consecutive days. Vaccination took normally. Revaccination several months later did not take. Lymph in vitro was prepared by the addition of penicillin in quantities varying between 300 and 600 units for 1 Gm. of lymph. Dilutions of both the penicillin and normal lymph in equal quantities gave equal results when used on the skin of rabbits and on the cornea of guinea pigs. The same results were obtained two months later. Vaccination with both penicillin treated and normal lymphs took in nonvaccinated persons. The pustules of the two kinds of vaccine lymph were equal. Penicillin was added to vaccine lymph in vitro. It reduced the number of secondary bacteria. The number of secondary bacteria in the lymph had diminished still more by the end of two months. The author concludes that penicillin does not interfere with the effect of vaccine virus both in vivo and in vitro and that it reduces the number of secondary bacteria in vaccine lymph.

Medicina, Madrid

14:231-298 (April) 1946. **Partial Index**

*Typhus in Those Vaccinated Against It. L. Castillón Mora.—p. 231.
Surgery of Stellate Ganglion. A. Perer y Prats.—p. 254.
Study of Etiology of Scarlet Fever. A. Utrilla.—p. 258.
Late Results of Arthroplasty of Elbow. J. P. Rodríguez de Ledesma.—p. 268.
Clinical Development and Cure of Necrotic Nephrosis Caused by Ingestion of Mercury Bichloride. A. Aznar Reig.—p. 273.

Typhus in Vaccinated Persons.—Thirty patients had been immunized by the method of Cox (killed yolk sac cultures) and 115 by the vaccine of Laigrait (attenuated living murine virus obtained from the brains of infected guinea pigs or rats). In

those who had received only a single dose of Cox's vaccine during the period of incubation the clinical aspects did not differ from those of classic typhus. Those who had received two or three doses of Cox's vaccine, at least one or two of them before or during the incubation period, had mostly mild or abortive forms. In patients vaccinated by the Laigrait method an increase in the mild and abortive forms was observed even in those who had contracted the disease shortly after vaccination, and the percentage of these cases was further increased when more than fifteen days had elapsed between vaccination and infection. There was a reduction in the mortality rate, particularly in the age groups that were most in danger, those between 40 and 60 years. The modification in the clinical aspects were more constant and characteristic in those treated with the method of Cox, but in both groups the exanthem was often absent, atypical or mild. Both vaccines exert a protective action, but Cox's method is the more effective. Revaccination is advisable in both methods after an interval of less than three months; with Laigrait's method better results are obtained by giving three doses at weekly intervals. Killed vaccines of the Cox or Weigl types offer the best protection against typhus.

Revista Médica de Chile, Santiago

74:167-260 (March) 1946. **Partial Index**

Treatment of Cardiac Insufficiency. R. Armas Cruz, E. Rojas Villegas, M. Besoain, A. Spencer G. and M. Levy.—p. 167.
Etiology of Circulatory Insufficiency in Childhood. A. Scroggie V., J. Symon O. and G. Duffau O.—p. 186.
Pneumococcic Meningitis Treated with Penicillin. G. Lira S.—p. 199.
*Malignant Lesions of Stomach. E. Otaiza.—p. 210.
Tuberculous Pleural Empyema: Evacuating Puncture and Medical Treatment. A. Rodriguez Rodriguez and F. Mendoza Toledo.—p. 218.
Complications of Emergency Tracheotomy in Children. G. Ziegler S. —p. 230.

Malignant Lesions of Stomach.—Otaiza reviews observations on 332 patients with malignant lesions of the stomach. Over 75 per cent of the patients were men, usually in the fifth decade of life. Surgical treatment was employed in 268 cases. The remaining number were either inoperable or rejected surgical treatment. Over 50 per cent, that is, 138 of the 268 patients operated on, were subjected to gastric resection. Gastric resectability was greater in persons who had had symptoms for more than a year, possibly because they had lesions of slow evolution. The mortality in gastric resection was 20 per cent, but this figure includes the esophagogastrectomies and the total gastrectomies. There were no surgical fatalities in 28 subtotal gastrectomies performed during the last year. Compensated heart lesions do not contraindicate surgical treatment. Cardioesophageal tumors which appear inoperable because of their location have been successfully extirpated by the transthoracic or transdiaphragmatic route.

Nordisk Medicin, Gothenburg

28:2651-2734 (Dec. 21) 1945. **Partial Index**

Is Our Tumor Systemization Rational? J. Engelbreth-Holm.—p. 2651.
Treatment of Constipation. H. Öhnell.—p. 2662.

Hospitalstidende

Death Due to Local Anesthesia in Thyroidectomy. N. Blixenkrone-Møller.—p. 2663.

Norsk Magasin for Lægevidenskapen

*Acute Yellow Atrophy of Liver and Its Relation to Epidemic Hepatitis. E. Wang.—p. 2672.
Heredoataxia Hemeralopica Polyneuritiformis—Familial Syndrome Not Previously Described? Preliminary Report. S. Refsum.—p. 2682.
Progressive Exophthalmos. J. H. Vogt.—p. 2687.

Hygiea

Eye Symptoms in Carbon Monoxide Intoxication. I. Kugelberg.—p. 2691.

Acute Yellow Atrophy of Liver and Epidemic Hepatitis.—Necropsies were done in 26 cases of acute yellow atrophy of the liver, 8 subjects being men and 18 women. Six patients had been exposed to infection with epidemic hepatitis. The frequency of acute yellow atrophy of the liver and also of epidemic hepatitis has increased during the last five years. This fact and the possibility of infection with epidemic hepatitis, together with the pathologic-anatomic points of similarity between the two disorders support the assumption that many cases of acute yellow atrophy of the liver are particularly grave forms of epidemic hepatitis or a complication of it. In epidemic hepatitis and beginning acute yellow atrophy of the liver the symptoms are the same. Every instance of apparently epidemic hepatitis should be regarded as possible acute atrophy and patients with it should be kept in bed till the jaundice has disappeared.

29:1-54 (Jan. 4) 1946. **Partial Index**

*Pathogenesis in Mixed Tuberculous Empyema and Treatment with Sulfonamides or Penicillin. T. Bruce, G. Hagerman, S. Stavenow and A. Westergren.—p. 1.

Hospitalstidende

Ear, Nose and Throat Complications in Infectious Mononucleosis. E. Berg.—p. 7.
Value of Simple Palpation of Deep Bile Ducts in Gallstone Operations. F. Sørensen.—p. 13.

Norsk Magasin for Lægevidenskapen

Origin of Endogenous Uric Acid Illuminated by Relation to Patients with Hemolytic Jaundice. P. Gundersen and R. Opsahl.—p. 18.

Hygiea

Hernia of Intervertebral Disk and Myelography with Water Soluble Contrast Medium. N. Andolf and S. Eneroth.—p. 23.

Mixed Tuberculous Empyema.—Bruce and his associates say that while mixed infection in empyema may develop after infection of the throat and the respiratory tract, and the possibility of hematogenic transport must be considered, spread of the infection by the lymph route is most important. Tuberculous empyema never clears up as long as the mixed infection persists. Favorable therapeutic results were attained with the various sulfonamides, but in most cases penicillin seemed to be superior. Treatment should be given after careful lavage of the pleural cavity and, in the case of penicillin, without open drainage. Large doses may be necessary. Tests in vitro of the sensitivity of the active bacteria to sulfonamide compounds or to penicillin may be useful. Other antibacterial agents that are commonly applied in the treatment of empyema must not be used in connection with penicillin.

29:55-106 (Jan. 11) 1946. **Partial Index**

Diagnosis and Introductory Treatment of Pernicious Anemia. J. Jørgensen.—p. 56.

Hospitalstidende

Bone Changes in Benign Lymphogranulomatosis. M. E. Gottlieb.—p. 57.
Syphilis Resistant to Therapy and Observation of Spirochete Strain Resistant to Therapy. G. Lomholt.—p. 60.
Chronic Ulcer in Axilla After Acute Lymphadenitis, Cured by Penicillin. P. Munck.—p. 63.
Cancer of Gallbladder in Girl Aged 13. A. Biering.—p. 64.

Medicinsk Revue

*Hematuria and C Hypovitaminosis. N. A. Nicolaysen.—p. 65.
Controlled Fluid Treatment in Surgical Diseases. H. Jensen.—p. 71.
Case of Pasteurella Infection in Dog Bite. A. Boeck Aubert.—p. 77.

Hygiea

Ankylosis of Jawbone and Its Treatment. Case. S. Orell.—p. 83.

Hematuria and C Hypovitaminosis.—Nicolaysen suggests that essential hematuria is often due to a C hypovitaminosis. Essential hematuria occurs fairly often in the coastal districts in western Norway, where agricultural conditions are not favorable. He reports 22 personal cases from Bergen and vicinity from 1932 to 1943 in 16 men and 6 women, of which 18 set in in the spring of the year, when the supply of natural vitamin C in Norway is scanty. In 20 cases the bleeding stopped when a diet rich in vitamin C was given, in 2 spontaneously. There was a relative increase in frequency during the war years with increasing food difficulties. In 6 of the 7 cases in which the vitamin C balance was determined by the saturation test the saturation deficit was over 2,000 mg.; in 1 it was 1,800 mg.

Book Notices

Pathology of Tropical Diseases: An Atlas. By J. E. Ash, Colonel, M. C., U. S. A., Director, Army Institute of Pathology, Army Medical Museum, and Sophie Spitz, M.D., C. S., A. U. S., Pathologist, Army Institute of Pathology, Army Medical Museum, Washington, D. C. Cloth. Price, $8. Pp. 350, with 941 illustrations, 15 in color, on 257 plates. Philadelphia & London: W. B. Saunders Company, 1945.

As the authors indicate in the preface, the literature of tropical medicine has been seriously deficient in adequate descriptions of the pathology of tropical diseases. The atlas is an important contribution to this field and will be of great value. It contains twenty-two chapters grouping the more important conditions on the basis of etiology, and the index provides easy reference both to illustrations and to textual material. In the treatment of the individual diseases there is a concise statement of the epidemiology, the clinical phenomena and a description of the pathologic changes and the detailed histology. The illustrations have been well selected and constitute a unique and extraordinarily useful pictorial presentation of the gross pathologic changes and the positive histopathologic findings. It seems regrettable that a greater proportion of the text is not devoted to description of the pathology. The need for such a reference textbook and the opportunities which the authors have had at the Army Institute of Pathology to meet this need call into serious question the wisdom of attempting, as they have done, to compress so much related information into such a restricted space. This is the more regrettable since it is apparent that that portion of the text relating to the epidemiology and the clinical features of these diseases was not edited by a clinician thoroughly versed in tropical medicine. In consequence there are errors and orientations which seriously detract from the value of the book to students and practitioners lacking special training. This is deplorable in view of the authoritative source of the volume.

In the discussion of scrub typhus the thrombiculid mite vectors are incorrectly said to ingest the blood of the host. The origin of the term "scrub" is erroneously ascribed to Burma, and it is stated that "there are approximately 9,200 species of mites" in New Guinea. The 30 per cent incidence of the eschar or primary lesion is far too low. In the experience of competent medical officers the incidence varied directly with the thoroughness of examination of the patient and in large series of cases was approximately 80 per cent. The statement that orientals seldom have a primary lesion similarly is not in keeping with experience with Chinese troops. Although wild rodents are suspected to be reservoirs of Rocky Mountain spotted fever, natural rickettsial infections of these mammals has never been proved. The statement that "the degree of clinical severity [of amebic colitis] depends upon lesions in the sigmoid and rectum" is a distortion of the facts and cannot be defended. In the discussion of epidemic primary pneumonic plague the statement that this form of the disease "has the highest mortality" is too conservative—it is very doubtful indeed whether any such cases survive. Conversely the statement "development of treatment [of leprosy] that gives hope of eventual cure" seems today too optimistic. The chapter on fungous diseases poses to the reader the trying and confusing problems of taxonomy and synonomy. Since the atlas takes its place among the military medical manuals, it is to be regretted that the authors did not follow more closely the presentation used in the Manual on Medical Mycology. The statement that the bedbug has been incriminated in the transmission of cutaneous leishmaniasis must be modified. Although it has been shown the Leishmania may develop in the bedbug under experimental conditions, naturally infected bedbugs have never been found, and the infection has not been transmitted by natural means by infected bugs. Contrary to the statement in the text, the ulcers of cutaneous leishmaniasis are characteristically chronic and very slow to heal when untreated. The didactic statement in the discussion of malaria that "transplacental malaria does not occur" must be modified at least by the addition of the qualification "through the normal placenta." The inference that congenital malaria does not occur is both erroneous and dangerous. It is admittedly rare, but practitioners in the tropics do see acute malarial infections in the newborn well within the incubation period of the normally transmitted infection. When such infections are not recognized and treated promptly, death of the infant usually results. In the discussion of ancylostomiasis it is stated that each worm may consume 0.67 Gm. of hemoglobin daily. This is an obvious error, since the literature sets 0.67 cc. of blood as the probable daily maximum.

Occasional looseness of terminology likewise gives unfortunate and incorrect impressions. Thus "miricidium ovum" and "miricidium with terminal spine" are at best unconventional and unusual terms. The term "chiggoe" is used as a synonym for chigger, the larva of the trombiculid mite, and reference is made to the bite of these larvae, which in fact do not have biting mouth parts and which appear to produce the lesion by the secretion of a proteolytic enzyme. Similarly, the lesions produced by Tunga penetrans are referred to as "chiggoe bite" and this term is used as the title of the illustrations. Despite these drawbacks this volume is a most important and useful addition to the reference works on tropical medicine. One cannot but hope, however, that in a future edition the description of the pathology will be considerably elaborated and that the presentation of epidemiology and the clinical features will be left to the standard textbooks of tropical medicine.

Sex and the Social Order. By Georgene H. Seward, Ph.D. Cloth. Price, $3.50. Pp. 301, with 23 illustrations. New York & London: McGraw-Hill Book Company, Inc., 1946.

Among lower animals sex is primarily a matter of biology says Professor Seward, psychologist at Simmons College, Boston. As one ascends higher in the evolutionary scale the mere biologic aspects become less important, while the psychologic and social aspects emerge and in mankind are decisive. Since the cultural differences in the roles of the two sexes are largely traditional in our Western civilization and seem to be modified easily, she concludes that the attempt to put men and women into two different spheres on the basis of sex is not justifiable. In fact, she thinks the differences between men and women should not be emphasized as much as at present; both should be regarded as human beings primarily rather than primarily male or female. Men should accept more of the "feminine values," while women should be given access to much more of the world's work that has hitherto been largely monopolized by men. The main value of the book is in the enormous amount of material digested and summarized, covering the development of sexuality, its manifestations in human beings and its educational and social ramification. The well written treatment includes some original contributions of the author and will be a convenient and authoritative source of material for those concerned with the relationships between the sexes in any part of the animal kingdom or at any age in the human species.

The Chemistry of the Carbon Compounds. By Victor von Richter. Edited by the Late Professor Richard Anschütz. Volume III: The Aromatic Compounds. Collaborators: F. Arndt, A. Butenandt, F. Rochussen, R. Tschesche, A. Weissberger. Newly translated from the twelfth German edition by A. J. Mee. Third English edition. Cloth. Price, $15. Pp. 794, with illustrations. New York: Elsevier Publishing Company, 1946.

This volume will be welcomed not only by the investigator in chemistry but by many others, particularly as a source of information on chemistry. It is a companion to volumes I and II and, like the preceding ones, needs no introduction to the chemist. The scope of the volume is broad, correlating a voluminous amount of material on aromatic compounds. It is brief, straightforward and clearly written, giving the original worker's reference whenever possible. The book will be of genuine value not only to organic chemists but also to those engaged in related fields, whether scientific or industrial.

Enfermedades del aparato digestivo. Por el doctor José A. Reyes y de Hechavarría. Fabrikold. Pp. 844, with 152 illustrations. Habana, Cuba: Cultural S. A., 1945.

This is a large book which covers the field of the digestive diseases. It appears to have been written largely for students, since the text is cut up into short paragraphs somewhat in the form of a syllabus for lectures. This method of writing has the advantages of briefness and clearcut organization, but it does not make for the most comfortable reading. There are practically no references to the literature.

Queries and Minor Notes

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

INTRADERMAL GOLD SALTS FOR LUPUS ERYTHEMATOSUS

To the Editor:—**A case of lupus erythematosus of the discoid variety has proved to be refractory to gold therapy, bismuth salts and most other routine therapies. Bismuth has apparently been successful in preventing the natural progression of the lesions. The affected areas are confined to the face and show minimal induration and infiltration after two years during which the condition has been present. The general condition of the patient is excellent. Is the injection of gold salts intradermally directly into the lesions advisable? What dosage should be used and what is the likelihood of pigmentation or cicatrix formation?**

Captain, M. C., A. U. S.

ANSWER.—It is presumed that all possible foci of infection and pulmonary tuberculosis have been definitely excluded. Gold salts can be injected intradermally directly into the discoid patches without danger of sequelae if the following directions are carried out:

Ten mg. of gold and sodium thiosulfate is dissolved in 1 cc. of a 1 per cent solution of procaine hydrochloride, preferably without epinephrine, and injected not more than 1 minim at a site. The injections are best given about the periphery of the patch and for an area about the size of a quarter (24 mm.) three injections of 1 minim each should suffice. If the patient has many patches, each one need not be treated every time. The injections are best spaced at intervals of two weeks. If improvement is not noted after ten treatments, the probability of improvement from this method is not likely. On the other hand, it sometimes takes as many as 100 injections to clear up a patient who is showing slow but progressive improvement, so that the method should not be discontinued if even the slightest progress is made. Occasionally it is advisable to give a few intravenous injections as an adjunct to the local therapy, if progress is slow.

Pigmentation, cicatrix formation or other unpleasant sequelae have not occurred with this method, although it has been used for treatment of patches on the eyelids and other equally sensitive areas.

ACETATE EXPOSURE AND MYOCARDIAL DISEASE

To the Editor:—**A man aged 52, who is a manufacturing chemist, has severe myocardial disease with alternation. The blood presure averages 130-120 systolic, 80 diastolic. The patient handles ethyl acetate, butyl acetate, amyl acetate and toluol (a petroleum substitute for toluene). Is there a causal relation between this chemical exposure and the patient's myocardial disease?**

Bernhard A. Fredde, M.D., Brooklyn.

ANSWER.—No. All the substances mentioned are mildly toxic after extensive exposure, chiefly to the respiratory tract. It is unlikely that a severe myocardial involvement can be attributed to such a cause in the absence of other manifestations more characteristic of the action of the substances mentioned.

PLASTIC CONTACT LENSES

To the Editor:—**A recent article on contact lenses stated that the lenses of light, transparent plastic "when correctly fitted do not irritate the eyes nor are they in any way harmful." Are plastic lenses subject to temperature distortion sufficient to cause irritation of the eye?**

Claire M. Macaulay, New York.

ANSWER.—Plastic contact lenses will not be distorted in shape by any temperature the body can endure. Some contact lenses are made from a variety of methyl methacrylate, which can be treated, as a finished contact lens, in a water bath to 178 F. (81 C.) for two minutes without distortion.

TOXICITY OF PLEXIGLASS

To the Editor:—**A man has severe continuous headaches of two months duration. A thorough urologic examination was negative. The patient works as a mechanic with Plexiglass and states that when he saws this glass a dense smoke with a disagreeable odor is given off. In my opinion he has probably an allergy to this Plexiglass. What is there in it that might cause headaches.**

H. D. Murdock, M.D., Tulsa, Okla.

ANSWER.—Plexiglass is probably more closely identified with methyl methacrylate than any other substance. However, Plexiglass represents a complex polymerized state of that ester resulting from the action of light, heat, oxygen and oxygen yielding compounds. In one process of manufacture acetone is combined with hydrocyanic acid, yielding acetone cyanohydrin. This in turn is treated with methanol to form methyl methacrylate, which through polymerization is transformed into the well known plastic. Through the action of heat and perhaps otherwise the reversal of this chemical train may take place, starting with the formation of certain short chain acids and continuing to the acetone cyanohydrin state provided any of the hydrocyanic acids or methanol has been retained within the plastic product, which is not the rule. When Plexiglass burns and to a lesser extent after the heat of friction from sawing, odors and irritating fumes may arise. The heavy odor is reminiscent of burnt camphor. The irritation produced is of sufficient degree to provoke immediate coughing and respiratory tract discomfort. The toxicity of methyl methacrylate as such is fairly well established through the work of Deichmann (*J. Indust. Hyg. & Toxicol.* **23**:343 [Sept.] 1941). He states that in animals and after relatively large doses of methyl methacrylate introduced orally, through inhalation and from skin surface applications, injury is demonstrable. The lungs, trachea and bronchi become congested, edematous and hemorrhagic and the lungs emphysematous. The heart may be damaged. The urinary bladder may be distended, and hematuria may arise. Oral administration is followed by extensive damage along the gastrointestinal tract. When death occurs, this is usually attributable to respiratory failure. Impairment of the nervous system may occur. The occurrence of headaches as the sole manifestation as described in the query is not characteristic. The methacrylates are related to the porphyrins, which in turn are associated with one type of photosensitivity. Headaches as one aspect of photosensitivity may be considered. The headaches described may or may not be caused by Plexiglass, dust or fumes.

PERIVERTEBRAL BLOCK FOR INDOLENT ULCER

To the Editor:—**A patient has an indolent ulcer secondary to decreased arterial circulation due either to arteriosclerosis or to Buerger's disease. Would perivertebral block be of value if a spastic element was present and how long would its effect last? Would a perivertebral block be contraindicated in a patient of this type?**

M.D., Indiana.

ANSWER.—The data submitted with the question are not sufficient to give a clear picture of the possible condition present. The location of the indolent ulcer is of definite importance from the standpoint both of diagnosis and of treatment. An indolent ulcer on the leg presents an entirely different problem from a chronic ulcer on one of the toes. The age and general condition of the patient are not mentioned. Buerger's disease is primarily a disease of young to middle aged patients, while arteriosclerosis, unless the patient has hypertension or diabetes, is principally a disease of the aged.

An indolent ulcer on the leg would not be due to Buerger's disease and rarely is the result of pure arteriosclerosis. Although it can occur with that condition, it occurs much more commonly in chronic thrombophlebitis. If this indolent ulcer is on the leg, a perivertebral block would not be of value. The chief function of the perivertebral block with a local anesthetic is to determine the presence of vascular spasm in the vessel of the extremity. In arteriosclerosis there may be no noticeable warming of the extremity after such a block. In Buerger's disease vasospasm occurs frequently in addition to thromboangiitis obliterans, and there may be a definite rise in the temperature of the leg and of the toes after perivertebral block. This temperature rise may last for two or three hours, depending on the amount of local anesthetic injected. However, symptomatic relief, especially of pain, may persist for a week or more. The exact explanation is not clear. It suggests that a reflex arc has been broken. Although a perivertebral block would not hasten the healing of a leg ulcer due to arteriosclerosis, such healing might be facilitated by lumbar sympathectomy. The results are not dramatic; the improvement, in fact, may be very slow. Rest in bed with the leg somewhat elevated is an important adjunct.

If the ulcer is on one of the toes, and in Buerger's disease it is most frequently on the great toe, the perivertebral block would again be of value only in indicating the presence of additional vasospasm. A lumbar sympathectomy may be of value if there is considerable spasm of the collateral circulation. However, if necrosis due to Buerger's disease is well developed, the probabilities are that amputation will have to be performed.

A perivertebral block is not contraindicated either in Buerger's disease or in arteriosclerosis. Its value lies chiefly in the determination of the presence or absence of vascular spasm. Some rather enthusiastic reports have appeared on the healing of ulcers following lumbar sympathetic block, but these results have not been confirmed in most clinics.

MUSCLE CRAMPS FOLLOWING MERCURIAL DIURETICS

To the Editor:—A man aged 65 has had chronic heart failure since a severe coronary thrombosis in December 1944. The patient receives maintenance doses of digitalis daily, which control the heart rate approximately at 76. Diuretics were effective without discomfort until six months ago, when it was noted that intravenous administration of 2 cc. of salyrgan or mercupurin caused severe muscle cramps in the legs, arms and back about one hour after injection, lasting almost a day. Mercuhydrin, which at first gave good results, was not effective even though 5 grains (0.32 Gm.) of quinine was given three times a day for two days preceding the last 1 cc. injection. A low salt free diet and ammonium chloride have failed to control the congestive failure. What method is suggested to prevent the cramps which result from administering the mercurial diuretics?

Harry Parks, M.D., Atlanta, Ga.

ANSWER.—The occurrence of muscle cramps without other symptoms of intolerance or idiosyncrasy to the mercurial diuretics suggests excessive dehydration of the muscles as the result of profuse diuresis. Cramps may occur even without a large output of urine if for some reason the free edema fluid is not mobilized but the normal interstitial fluid of the muscles is temporarily reduced by the action of the mercurial. Certain facts should be available, such as the degree of the patient's edema, the output of urine following the injection of the mercurial and the change in weight. With excessive diuresis the serum chlorides may fall 10 per cent or more, and this change according to some observers may be responsible for symptoms. However, the use of ammonium chloride in adequate amounts (4 to 6 Gm. daily) for a few days before the injection of the mercurial should prevent the fall of the serum chlorides. Obviously the determination of serum chloride before and after diuresis would help. If there is a considerable fall, a few grams of sodium chloride may be administered shortly before the injection of the diuretic. A reduction of the dosage of the mercurial to 1 cc. may also help in reducing the incidence or severity of the cramps. At times, loss of calcium in the urine may be excessive and a trial of calcium gluconate, intramuscularly or intravenously, shortly before the diuresis is initiated may be effective.

PROVIDING IODINE IN SALT FOR BELGIAN CONGO

To the Editor:—I have noted a number of goiters in our section of the foothills among the tributaries to the Congo River. There seem to be fairly well defined foci where goiters and thyrotoxicosis are much more prevalent than elsewhere. We are among tribes emerging from primitive life, who would not find it practical to take some expensive preventive, for example iodized refined table salt. There would be financial problems involved of distribution from understaffed medical centers and other difficulties. I have raised the question with the chief medical officer of our province whether it would be feasible to import from the coast marine salt in large quantities to put on the local market instead of, or else in competition with, the ordinary "rock" or "trade" salt ordinarily sold. My idea would of course be the higher iodine content of marine salt. The provincial medical officer suggested that I get further documentation on the matter to support my proposal. Hence I am asking advice on this project. Particularly is there sufficient evidence in the literature that marine salt, taken in the food in place of ordinary salt, would be an effective prophylactic measure, in mass, against goiter? Are there any practical suggestions as to means of transporting large quantities of marine salt on an inexpensive basis? Would there be more rusting of metal parts of railway cars and trucks than with rock salt? Our ordinary rock salt is sold in burlap bags. Packaging in small water-tight containers would probably be too expensive.

W. S. Hughlett, M.D., Belgian Congo, Africa.

ANSWER.—The conditions described in the query pose a most interesting medical problem. The cause and prevention of thyroid disturbances and the tremendous biologic significance of endemic goiter are known, yet there are difficulties to overcome. The problem is to deliver to these primitive tribesmen in the foothills of the Congo River a salt which has a better flavor and appearance than the crude salt now used. At the same time the salt must contain iodine in sufficient amount to prevent goiter and cost the consumer no more than the crude or rock salt. This can be done by the cooperation of the salt producers and a little financial assistance from some source. These primitive people also must be impressed with the fact that this new salt will prevent goiter.

Fresh crude marine salt made by solar evaporation contains iodine in amounts comparable to the usual iodized salt. However, it loses its iodine rapidly and, if shipped in burlap bags, would soon lose all its iodine.

Whether marine or mined salt is used, two conditions must be met: (1) a stabilizer must be added and (2) it must be shipped in moisture proof bags. First, when the salt is in solution and ready for the final evaporation, 2 pounds of sodium carbonate and 2 pounds of sodium thiosulfate should be added so that these amounts are contained in a ton of dried salt. The crude salt should be analyzed for iodine content by the Hart method, which is the simplest and most accurate, and if the iodine content is not equivalent to 0.01 per cent of potassium iodide a sufficient amount of potassium iodide can be added with the stabilizer. The Wisconsin Alumni Research Foundation, Madison, Wis., will give complete details for the Hart method of iodine determination and efficient stabilization. Second, iodized salt must be packaged in moisture proof bags. The United States Army uses multiwalled moisture proof paper bags of 100 pounds capacity. This is the cheapest and most satisfactory way of shipping any salt to preserve the iodine content. These bags are made of four thicknesses of Kraft paper with at least two layers of asbestos moisture proofing, and, to complete the moisture proofing, the top or opening is first sewed and then sealed. In this country the paper bags cost less than one third as much as burlap bags. The saving on bags will pay for stabilization with extra iodine if needed. With these moisture proof paper bags there will be no problem as to rusting of cars or trucks. Under no circumstances will there be any difference between iodized and noniodized salt in this respect.

DEFINITION OF SCALP

To the Editor:—What is the definition of scalp? According to Gould's Medical Dictionary and Gray's Textbook of Anatomy the scalp is that portion of the skin (integument) that covers the skull/cranium. According to Cunningham's Anatomy of Dissection of the Head the scalp consists of the five layers of soft tissues covering the cranium: (1) integumen, (2) superficial fasciae, (3) epicranius muscles (occipitalis and frontalis connected by galea aponeurotica), (4) areolar tissue and (5) pericranium.

Estelle Wingler, Chicago.

ANSWER.—The anatomic definitions of the "scalp" are variable. In the narrowest sense the scalp is the hairy integument or cutis that covers the frontal, temporal, parietal and occipital regions. The bones underlying these areas comprise the calvaria or skull vault.

The definition of the scalp in a broader sense includes some layers of soft tissues between the integument proper and the skull. Some anatomists and textbooks, for instance Grant's "A Method of Anatomy" (1940), consider the tela subcutanea and the epicranius as part of the scalp. The tela is a fibrofatty layer intimately adherent to the derma of the cutis and the epicranius consists of the "scalp muscles" (frontalis and occipitalis) with the epicranial aponeurosis (galea aponeurotica) between them. The contractions of these muscles move the "scalp in the broader sense."

The all-inclusive definitions of the "scalp" such as given in Gray's Anatomy (1944), Morris's Anatomy (1942) or Cunningham's Manual of Practical Anatomy, volume 3 (1927), consider all soft layers between cutis and skull bones as part of the scalp. This includes the subaponeurotic layer of loose areolar tissue (one which the upper layers of the scalp move) and the pericranium or external periosteum of the skull vault. The subaponeurotic layer or "space" corresponds to the plane of separation in "scalping"; it is also known as the "dangerous area of the scalp" because of the possible effusion of blood and the spreading of infection following scalp wounds.

It is evident from all these definitions that the "scalp" extends beyond the hairline on the forehead to the supraorbital margin. This involves an overlap with areas usually considered as part of the face. Consequently the definitions of the latter are also variable.

Anatomists recognize the need for unification of the terminology relative to "scalp." Nomenclature commissions are active in various countries, but international agreements have been delayed by the war.

USE OF PENICILLIN FOR SKIN INFECTIONS

To the Editor:—What is the best method of administering penicillin in the treatment of skin conditions caused by staphylococci and streptococci? If penicillin is applied locally, must the ointment be prepared daily?

Frank A. Andrews, M.D., Coldwater, Mich.

ANSWER.—The best method of treating skin conditions caused by staphylococci and streptococci with penicillin is by intramuscular injection. The local application of ointments containing penicillin as approved by the Food and Drug Administration may be used together with other procedures that prevent the spread of infection locally. Ointments do not have to be applied daily.

LIVER THERAPY FOR ANEMIA DUE TO LOSS OF BLOOD

To the Editor:—Is there any scientific reason for prescribing parenteral liver instead of iron preparations for a patient who has an anemia due to blood loss with a low hemoglobin and a low erythrocyte count?

M.D., Pennsylvania.

ANSWER.—There is no rationale for the use of parenteral liver extract in anemias that are not macrocytic and are not associated with a megaloblastic bone marrow. In anemias due to blood loss, maximum regeneration is obtained with oral iron therapy plus an adequate diet.